# FINAL REPORT

# Evaluation of the 2006 May Click It or Ticket Mobilization

Prepared for:
Office of Highway Safety Planning
4000 Collins Road
Lansing, MI

Prepared by:
Wayne State University
Transportation Research Group
Detroit, MI

Date: October 2006





# Evaluation of the 2006 May Click It or Ticket Mobilization

## **Final Report**

Prepared for:
Office of Highway Safety Planning
4000 Collins Road
Lansing, MI

Prepared by:
Tapan K. Datta, Ph.D., P.E. and
Deborah M<sup>c</sup>Avoy, M.S., P.E., PTOE
Wayne State University
Transportation Research Group
Detroit, MI

Date: October 2006

The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Michigan Office of Highway Safety and Planning, the U.S. Department of Transportation, or the National Highway Transportation Safety Administration. This report was prepared in cooperation with the Michigan Office of Highway Safety Planning and the U.S. Department of Transportation, and the National Highway Traffic Safety Administration.

1. Report No.	2. Government Acco	ession No.	3. Recipient's Cata	log No.	
4. Title and Subtitle  Evaluation of the 2006 May Cli	ick It or Ticket Mo	obilization	5. Report Date October 2006		
Evaluation of the 2000 May en	en i or i ener iii		6. Performing Orga	anization Code	
7. Author(s) Tapan K. Datta and Deborah S	. McAvoy		8. Performing Orga	anization Report No.	
9. Performing Organization Name and A Wayne State University-Transp		Group	10. Work Unit No.	(TRAIS)	
Department of Civil and Environment 5451 Cass Avenue, #208, Schar Detroit, MI 48202	_	ring	11. Contract or Gra	ant No.	
12. Sponsoring Agency Name and Addr Office of Highway Safety Pla 4000 Collins Road		13. Type of Report Final Report	and Period Covered		
Lansing, MI 48909			14. Sponsoring Ago	ency Code	
15. Supplementary Notes					
This study reports the results of the mobilization of 2006. Three way over-sample pre-media, rural overstatewide post-enforcement. 192 rural over-samples, respectively, and categorized by vehicle type, statewide safety belt use was 8 enforcement and public awareness approximately 81.4 and 86.1 percent in continues to improve safety belt to the use of safety belts and should	ves of observation er-sample with s and 75 intersection. All drivers and evenicle use, generally percent and ess campaign. In the post campaigns of the post campaigns are still the still the post campaigns of the still the still the still the post campaigns.	al surveys were of tatewide pre-enfo on/interchange sit front-seat passeng der, age and race, the use rate in the rural over-san e-media and pre-e ign period. Alth- ate, males and pic-	conducted as a particle of the	art of this study; rural ral over-sample with statewide survey and red for safety belt use forcement campaign, ercent following the rates increased from raign, respectively, to the or Ticket campaign	
17. Key Words		18. Distribution Statement			
19. Security Classification (report)	20. Security Classit	Unlimited fication (Page)	21. No of Pages	22. Price	
Unclassified	Unclassified		86		

86

# TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION	1
<ul><li>1.1 Study Purpose and Objectives</li><li>1.2 Study Area</li></ul>	
2.0 METHODOLOGY	4
<ul><li>2.1 Statewide Sample Design</li><li>2.2 Rural Over-Sample Design</li></ul>	
3.0 OBSERVER TRAINING	10
4.0 DATA COLLECTION	12
5.0 DATA ANALYSIS	13
<ul><li>5.1 Weighted Safety Belt Use Calculations</li><li>5.2 Overall Statewide Safety Belt Use Calculations</li></ul>	
6.0 RESULTS AND CONCLUSIONS	15
<ul> <li>6.1 Statewide Observational Surveys</li> <li>6.2 Rural Over-Sample Observational Surveys</li> <li>6.3 Program Comparisons</li> <li>6.4 Program Enhancements</li> </ul>	38 58
REFERENCES	60
APPENDIX I – COMPLETE LISTING OF THE OBSERVATION MICHIGAN	
APPENDIX II – STATEWIDE SAFETY BELT USE RATES BY	COUNTY69
APPENDIX III – STATEWIDE SAFETY BELT USE RATES BY	/ INTERSECTION71
APPENDIX IV – RURAL OVER-SAMPLE SAFETY BELT USE	E RATES BY COUNTY79
APPENDIX V – RURAL OVER-SAMPLE SAFETY BELT USE INTERSECTION	

## LIST OF FIGURES

PAGE
Figure 1. 32-County Statewide Sample for the Direct Observation Safety Belt Surveys
Figure 2. 2005 Through 2006 Safety Belt Use Rate Trends
LIST OF TABLES
Table 1. U.S. Census Bureau 2004 Census Data for Michigan by County
Table 2. Vehicle Miles of Travel by Stratum
Table 3. Statewide Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers16
Table 4. Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum16
Table 5. Statewide Descriptive Statistics
Table 6. Statewide Safety Belt Use Summary
Table 7. Statewide Safety Belt Use Rates by Stratum and County
Table 8. All Vehicles Statewide Summary
Table 9. Passenger Cars Statewide Summary
Table 10. Sport Utility Vehicles Statewide Summary
Table 11. Vans/Minivans Statewide Summary
Table 12. Pick-up Trucks Statewide Summary
Table 13. All Vehicles Statewide Demographic Summary
Table 14. Passenger Cars Statewide Demographic Summary
Table 15. Sport Utility Vehicles Statewide Demographic Summary
Table 16 Vans/Minivans Statewide Demographic Summary 35

# **LIST OF TABLES (Continued)**

Pick-up Trucks Statewide Demographic Summary	37
Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum for Rural Over-Sample Survey	39
Rural Over-Sample Survey Descriptive Statistics	40
Rural Over-Sample Survey - Safety Belt Use Summary	41
Rural Media Market Survey - Safety Belt Use Summary	42
Rural Control Survey - Safety Belt Use Summary	43
Rural Over-Sample Safety Belt Use Rates by Stratum and County	44
All Vehicles Rural Over-Sample Summary	46
Passenger Cars Rural Over-Sample Summary	47
Sport Utility Vehicles Rural Over-Sample Summary	48
Vans/Minivans Rural Over-Sample Summary	50
Pick-up Trucks Rural Over-Sample Summary	51
All Vehicles Rural Over-Sample Demographic Summary	53
Passenger Vehicles Rural Over-Sample Demographic Summary	54
Sport Utility Vehicle Rural Over-Sample Demographic Summary	55
Vans/Minivans Rural Over-Sample Demographic Summary	56
Pick-up Trucks Rural Over-Sample Demographic Summary	57
2005 and 2006 Comparison	58
	Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum for Rural Over-Sample Survey

#### 1.0 INTRODUCTION

Increasing the use of safety restraint systems while driving or traveling as a passenger in an automobile is one of the most effective and cost-effective ways of reducing injuries and fatalities on the nation's highways; however, one out of five drivers and front-seat passengers continue to ignore laws and safety precautions and drive/ride unbuckled in the nation. Efforts have been made to increase the use of safety belts over three decades, yet nationwide approximately 18 percent of the drivers and front-seat passengers do not buckle up while driving or riding in an automobile [1]. In Michigan, past safety belt use studies indicate that the overall use by drivers and front-seat passengers has been increasing consistently over the past five years. The past six years' experience is as follows:

2000 - 83.5%

2001 - 82.3%

2002 - 82.9%

2003 - 84.8%

2004 - 90.5%

2005 - 92.9%

The above data indicates that the safety belt use rate in Michigan is far ahead of the national average and is one of nine states and territories with reported safety belt use rates greater than 90 percent [1]. It is important to recognize that Michigan is a "primary law" state, which means a motorist can be stopped and cited for the sole reason of not wearing a safety belt. In "secondary law" states, motorists must be stopped for another traffic-related offense in order to be ticketed for not wearing a safety belt. The "primary law" states averaged a safety belt use percentage of 85 percent as compared to the "secondary law" states, which only averaged 75 percent in 2005 [2].

The use of safety belts is the single most effective means of reducing fatal and non-fatal injuries in vehicular crashes. Many studies have demonstrated the ability of safety belts to reduce the severity of injuries. The National Highway Traffic Safety Administration (NHTSA) estimates that 195,382 lives have been saved between 1975 and 2004 due to the use of safety belts [3].

They also contend that the non-use of safety belts can cause fatalities and severe injuries, which may result in an overall societal cost of 50 billion dollars in the nation each year [4].

Currently, airbag systems are a part of standard equipment in all vehicles. Vehicles equipped with airbags need the occupants to be restrained by safety belts in order to be effective in saving lives and reducing injuries in the event of a severe crash. Safety belts protect vehicle occupants by reducing the risk of ejection, impact with the vehicle interior, or being too close to deployed airbags.

Past studies indicate that the use of safety belts reduces the risk of fatal injury for driver and front-seat passengers by approximately 45 percent for passenger vehicles and 60 percent for light trucks. Moreover, the use of safety belts reduces the risk of moderate to critical injury by 50 percent for occupants of passenger vehicles and 65 percent for occupants of light trucks [3]. Therefore, a small increase in safety belt use often results in a large overall savings to society. The non-use of safety belts is a behavioral issue and, therefore, programs targeted to change driver behavior can have a long lasting impact in the safety belt use rate among the driving population.

In order to promote safety belt usage, the Office of Highway Safety Planning (OHSP) participates in a national safety belt/law enforcement mobilization program entitled, *Click It or Ticket*. This campaign focuses on Memorial Day each year and involves several weeks of advertising, an intense statewide publicity campaign, and increased enforcement using special signs denoting safety belt enforcement zones at selected locations. In May 2006, law enforcement officials in 55 counties across the State patrolled 800 designated safety belt enforcement zones. The effort of the safety belt enforcement zones aims to increase safety belt use to 95 percent, which is more than two (2) percent higher than what was experienced in 2004 [5]. The deployment of this public awareness campaign and enforcement mobilization over a holiday period is an effective way to reach a large number of drivers over a short period of time. Many people in Michigan travel long distances for recreational purposes during this holiday and their driving behavior may be different as compared to their typical utilitarian commute. Many drivers may experience additional distractions such as traveling with multiple passengers or

towing heavy loads like boats or trailers. This may alter their typical driving habits resulting in increased safety belt non-use and may also impact their perception of risk in hazardous situations. Additionally, during holiday periods more drivers on the road may be under the influence of alcohol, which places themselves and other road users at an even higher risk. This makes the use of safety belts extremely important in saving lives and reducing injuries to motorists during periods of recreational travel.

For the May 2005 and May 2006 *Click It or Ticket* campaigns, OHSP provided funding for enforcement zones in fifty-five counties, up from forty-eight in 2004 and twenty in 2003. Other enforcement activity covered seventy-six of Michigan's counties, along with statewide earned and paid media campaigns.

#### 1.1 Study Purpose and Objectives

The purpose of this statewide study was to perform a before and an after enforcement observational surveys for 192 statewide and 75 rural over-sample intersections/interchanges to determine the percentage of drivers and front-seat passengers utilizing their safety belts. The rural over-sample survey included before-media, after-media/before-enforcement and after-enforcement observational surveys with 60 intersections in the media markets in Traverse City, Marquette, and Flint, and 15 intersections in rural areas not included in the media markets.

The specific objectives of this study were as follows:

- Develop a methodology for collecting data for a representative sample of sites throughout the State, which ensured reliable statewide statistics, in an economically feasible manner.
- Provide training to all staff conducting the observation surveys and conduct quality assurance/quality control of the data collection efforts.
- Conduct "before" and "after" observational surveys of safety belt use during the *Click It* or *Ticket* mobilization.
- Summarize the observational data of safety belt use and nonuse in a tabular format by location and by county for the "before" and "after" periods.
- Evaluate the effectiveness of the *Click It or Ticket* mobilization program by comparing safety belt use rates before and after the campaign.

#### 1.2 Study Area

The study area for the statewide observational survey included the counties that represented at least 85 percent of the population in the State of Michigan. The study area for the rural oversample included three media markets in Traverse City, Marquette, and Flint, as well as a rural control over-sample including the areas not covered in the media efforts. At the request of NHTSA from the previous rural over-sample survey of 2005, Genesee County was removed from the study area for the Flint media market due to its urban character. The counties that were included in the rural over-sample study are as follows:

- <u>Flint Media Market</u>: Arenac, Bay, Gladwin, Gratiot, Huron, Iosco, Isabella, Midland, Ogemaw, Saginaw, Shiawassee, Tuscola
- <u>Marquette Media Market</u>: Alger, Baraga, Delta, Dickinson, Houghton, Iron, Keweenaw, Marquette, Ontonagon, Schoolcraft
- <u>Traverse City Media Market</u>: Antrim, Benzie, Charlevoix, Cheboygan, Chippewa, Clare, Crawford, Emmet, Grand Traverse, Kalkaska, Lake, Leelanau, Luce, Mackinac, Manistee, Mason, Mecosta, Missaukee, Montmorency, Osceola, Oscoda, Otsego, Presque Isle, Roscommon, Wexford
- Rural Control (No Media Participation): Allegan, Ionia, Lapeer, Montcalm, Van Buren

#### 2.0 METHODOLOGY

#### 2.1 Statewide Sample Design

In order to develop targeted public awareness programs to increase safety belt use, one must know the distribution of use rates in various parts of the state and among various demographic groups, in addition to knowing the overall safety belt use rate in the state. It is, however, important to capture the statewide use rate following the sampling strategy and data collection procedure recommended by NHTSA. WSU-TRG performed such observational surveys in the state as a part of this project.

The site selection methodology followed the procedure used in the Direct Observation of Safety Belt Use in Michigan surveys for the years 2000 to 2005. The uniform criteria, as presented in the Federal Register and the National Highway Traffic Safety Administration documents, was

also examined carefully to ensure adherence to the nationwide standard. The methodology for the evaluation of the May *Click It or Ticket* project followed NHTSA's guidelines, resulting in the selection of areas in the state to encompass 85 percent of the population, is described as follows:

- The 32-county sample was selected for this survey that represented 86.86 percent of the state's population, based upon 2004 U.S. Bureau of Census Data estimates as shown in Table 1. This sample of counties also fulfills NHTSA's requirements. The counties included in the study are depicted in Figure 1, and they include most of the fifty-five counties targeted for organized enforcement zones in May 2006 campaign.
- A system for partitioning the candidate counties into various strata, based upon safety belt use and vehicle miles traveled (VMT), was developed and is shown in Table 2. The number of observation sites for each stratum is also shown in Table 2. Forty-eight (48) sites were observed for Stratum 1, 50 sites for Stratum 2, 53 sites for Stratum 3, and 41 sites for Stratum 4. Expanding to 192 sites allowed the addition of sites to higher VMT strata, allowing for a more precise estimate of safety belt use. A complete listing of the 192 sites is provided in Appendix I.

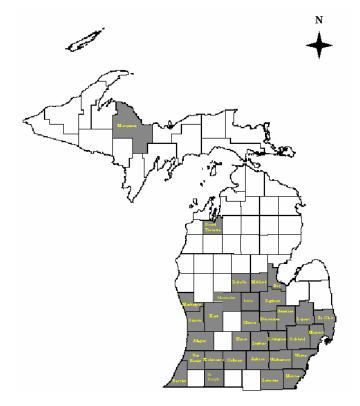


Figure 1. 32-County Statewide Sample for the Direct Observation Safety Belt Surveys

Table 1. U.S. Census Bureau 2004 Census Data for Michigan by County

State of Michigan Total Population = 10,112,620

Name of County	Population	Percent Population	Cumulative Percent Population Statewide for Michigan	County Ranking by Population	County Included in Study
Wayne County	2,016,202	19.94%	19.94%	1	Yes
Oakland County	1,213,339	12.00%	31.94%	2	Yes
Macomb County	822,660	8.13%	40.07%	3	Yes
Kent County	593,898	5.87%	45.94%	4	Yes
Genesee County	443,947	4.39%	50.33%	5	Yes
Washtenaw County	339,191	3.35%	53.69%	6	Yes
Ingham County	280,073	2.77%	56.46%	7	Yes
Ottawa County	252,351	2.50%	58.95%	8	Yes
Kalamazoo County	240,724	2.38%	61.33%	9	Yes
Saginaw County	209,062	2.07%	63.40%	10	Yes
Livingston County	177,538	1.76%	65.16%	11	Yes
Muskegon County	174,401	1.72%	66.88%	12	Yes
St. Clair County	170,916	1.69%	68.57%	13	Yes
Berrien County	163,125	1.61%	70.18%	14	Yes
Jackson County	162,973	1.61%	71.80%	15	Yes
Monroe County	152,552	1.51%	73.30%	16	Yes
Calhoun County	139,067	1.38%	74.68%	17	Yes
Allegan County	112,477	1.11%	75.79%	18	Yes
Bay County	109,480	1.08%	76.87%	19	Yes
Eaton County	107,056	1.06%	77.93%	20	Yes
Lenawee County	101,768	1.01%	78.94%	21	Yes
Lapeer County	92,510	0.91%	79.85%	22	Yes
Midland County	84,615	0.84%	80.69%	23	Yes
Grand Traverse County	82,752	0.82%	81.51%	24	Yes
Van Buren County	78,541	0.78%	82.29%	25	Yes
Shiawassee County	73,125	0.72%	83.01%	26	Yes
Clinton County	68,800	0.68%	83.69%	27	Yes
Marquette County	64,874	0.64%	84.33%	28	Yes
Isabella County	64,481	0.64%	84.97%	29	Yes
Ionia County	64,378	0.64%	85.60%	30	Yes
Montcalm County	63,627	0.63%	86.23%	31	Yes
St. Joseph County	62,964	0.62%	86.86%	32	Yes

**Table 2. Vehicle Miles of Travel by Stratum** 

	VMT (2004)	Total VMT	Percent of	Number of
	(in Thousands)	(in Thousands)	<b>Total VMT</b>	Sites
Stratum 1				
Ingham	2,589,095			
Kalamazoo	2,603,446	=		
Oakland	13,113,695	=		
Washtenaw	3,742,005	-		
Total Stratum 1 VMT	- , . ,	22,048,241	25.06%	48
Stratum 2				
Allegan	1,234,491			
Bay	1,325,042			
Eaton	1,189,516			
Grand Traverse	806,758			
Jackson	1,723,634			
Kent	5,773,450	1		
Livingston	1,954,324			
Macomb	6,527,891	]		
Midland	827,006			
Ottawa	2,077,284			
Total Stratum 2 VMT		23,439,396	26.64%	50
Stratum 3				
Berrien	2,180,694			
Calhoun	1,731,659			
Clinton	1,140,428	-		
Genesee	4,731,531			
Ionia	714,959	-		
Isabella	587,432			
Lapeer	892,081	-		
Lenawee	898,211			
Marquette	629,897			
Monroe	2,143,438			
Montcalm	589,027			
Muskegon	1,447,105			
Saginaw	2,259,369	]		
Shiawassee	779,541			
St. Clair	1,624,723			
St. Joseph	579,553	]		
Van Buren	1,000,428			
Total Stratum 3 VMT		23,930,076	27.20%	53
Stratum 4				
Wayne	18,575,126			
Total Stratum 4 VMT		18,575,126	21.11%	41
Total Strata VMT		87,992,839		

- For each observation site, a minimum of 50 vehicles were observed in at least a 50-minute time frame. If more than 50 minutes were needed to complete 50 observations, the observations were appropriately reweighted, as explained in the Data Analysis Section of this report. The data collected for the 192 observation sites provided an accurate representation for each day of the week and each hour of the day for the safety belt use characteristics of the state.
- The locations of the 192 observation sites were randomly selected. The observation sites were distributed among limited access highways and major intersections. The sites were randomly chosen using a method that ensured an equal probability for each location in each stratum being selected as a candidate location. For the selection of the candidate locations, equal scale (3/8 inch = 1 mile) road maps were obtained for each county. A computerized grid was overlaid on each county map at 0.5-mile intervals in the horizontal and vertical directions. These squares represented a square area of 0.25 square miles. Each grid on the county map was assigned two numbers representing an X and Y coordinate. In addition, each grid was assigned a number by stratum. For each stratum, a random number was chosen between one and the number of grids covering the stratum. Then two additional random numbers were selected representing the X and Y coordinates of the selected grid. coordinates were chosen until an intersection was found located in the grid coordinates. This process was repeated until all the primary intersections were selected for the four strata. In addition, secondary intersections were selected for each primary intersection. Secondary intersections were selected within a 16 square mile area from the primary intersection site. For the selection of exit ramps, all exit ramps on limited access highways located within the strata were numbered sequentially. Random numbers were selected between one and the number of ramps to determine which exit ramps would be considered as candidate locations. An alternate exit ramp was also selected for each candidate location.
- Upon the determination of the sites, the direction of traffic flow, day of the week and time of day at each observation site was determined through a similar random sampling method ensuring equal probability. For each intersection randomly selected, the direction of traffic flow for observation was also randomly selected.

Random numbers between one and four were assigned for each primary and secondary intersection's direction of traffic movement. The selected random numbers represented one for eastbound, two for southbound, three for westbound and four for northbound. This process allowed random selection of the direction of traffic flow as well as the roadway for inclusion in the observation study.

- Since only non-moving traffic was observed at each site with a target of 50 vehicles, not all vehicles passing the observation site were included in the survey. Therefore, a 10-minute traffic count was the basis for estimating the number of vehicles passing the observation site per unit time. This data introduced a weighting factor for each observation site. The 10-minute count was collected in two 5-minute intervals; five minutes prior to the observational period and five minutes following the observational period.
- In order to minimize the travel time and distance required to conduct this study, the observation sites were clustered into geographic regions upon final selection without compromising the randomness of the data.

### 2.2 Rural Over-Sample Design

OHSP had selected four rural over-sample regions for the 2006 *Click It or Ticket* campaign including the Traverse City area, Marquette area, Flint area, and rural control area. This rural survey of three media markets was the second year of observational surveys. The methodology for the rural over-sample survey also followed NHTSA's guidelines and are as follows:

- The rural over-sample included the Traverse City, Marquette, Flint Media Markets, and a rural control area. For the Flint Media Market, Genesee County was removed from the list of the candidate counties due to its urban character.
- The number of observation sites, as recommended by NHTSA in the 2005 observational survey project, was 14 sites for the Traverse City area, 30 sites for the Marquette area, and 16 sites for the Flint area. An additional 15 sites were selected in the rural control area as indicated by OHSP.
- For each observation site, a minimum of 50 vehicles were observed in a minimum 50-minute time frame. Due to the rural nature of the counties included in each of the

areas, a longer observation period was needed to obtain a statistically valid sample size of 50 vehicles.

- The location of the 45 observation sites in the Traverse City, Flint and rural control
  areas were randomly selected in a similar fashion as the 192 statewide observation
  sites.
- The 30 observation sites in the Marquette area were selected based upon roadway type. The roadways in the Marquette area were subdivided into six categories:
  - Trunkline
  - County Primary
  - County Local
  - City Major
  - City Local
  - Federally Owned

The percentage of each roadway type was determined based upon the 2003 vehicle miles of travel by county by roadway classifications. To select the 30 observation sites in the Marquette area, equal scale (3/8 inch = 1 mile) road maps were obtained for each county and computerized with a grid overlay. The grid was at 0.5-mile intervals in the horizontal and vertical directions. In addition, the roadways were color coded by roadway type. Each grid on the county map was assigned two numbers representing an X and Y coordinate. Each county map was also assigned a number. For each roadway type, a random number was chosen between one and the number of counties. Then two additional random numbers were selected representing the X and Y coordinates of the selected county grid. Random coordinates were chosen until an intersection with the desired roadway type was located in the grid coordinates.

#### 3.0 OBSERVER TRAINING

Several staff members from the WSU-TRG participated in the data collection for this project. Each of these staff members has or is pursuing an engineering degree and has been trained in general traffic data collection methods and procedures. For this project, each data collector received specific training composed of technical assistance and field data collection. Each

member of the data collection team participated in a reliability and repeatability study to reach a 95 percent or greater reliability and repeatability in their field data collection tests prior to being deployed for the data collection for this project. The repeatability of a measurement depends on the within-subject standard deviation, which can be calculated using a sample of closely repeated measurements. The repeatability coefficient is simply the within-subject standard deviation adjusted by a probability-based factor and is an estimate of the maximum difference likely to occur between two successive measurements on the same subjects. Reliability concerns the extent to which repeated measurements by the same method on the same subject produce the same result.

The reliability and repeatability study was performed at one of the selected sample intersections for this project, Woodward Avenue and Warren Avenue, near the WSU campus. This intersection represents a typical high volume intersection that could be challenging for observational data collection. For two hours per day over five days, two observers were randomly paired and assigned to collect safety belt observational data for one direction of traffic flow at the selected intersection. Although the observers were observing the same traffic flow direction, they did not interact and did not necessarily observe the same vehicles.

The data was then summarized for each paired individual to determine the accuracy of their observations. Accuracy for each data collection entity was calculated greater then 95 percent. This training was given to the data collectors approximately two months prior to the first wave of field data collection for the rural over-sample survey. The trained data collectors were re-tested for their performance and accuracy two weeks prior to the commencement of the first rural over-sample survey.

Upon completion of the training for the data collection, each member of the team received a training manual composed of the information received during the training session, the schedule of data collection and all necessary field supplies.

Two field supervisors monitored the performance of the field observers. In order to establish a baseline reference of 'expected' safety belt use rates, preliminary observation data from previous studies was obtained for each stratum. The field data collectors submitted their observation data on a daily basis and it was immediately entered and compiled on computer spreadsheets at our WSU campus office. Comparisons were then made between the observed rates and the 'expected' safety belt use rates during the first rural over-sample and statewide survey in order to identify any unexpected deviations in the data. Deviations were not found to be substantially different than anticipated.

#### 4.0 DATA COLLECTION

Data collection for the "pre-media" rural over-sample mobilization program occurred from April 17 through May 1, 2006. Data collection for the "before" enforcement zone mobilization program, including the rural over-sample and statewide surveys, occurred between May 2, 2006 and May 15, 2006. Data collection for the "after" enforcement zone mobilization program, including the rural over-sample and statewide surveys, occurred between June 4, 2006 and June 18, 2006.

The driver of each vehicle and the passenger in the front right seat of the vehicle were observed for safety belt use, non-use and misuse. In all the surveys both the driver and front-seat passenger were separately identified based upon their gender, estimated age and race. The vehicles were categorized into four groups: passenger vehicles, sport utility vehicles, vans or minivans, and pick-up trucks. The vehicles were also identified as being commercial or non-commercial vehicles.

The data collected in the field was recorded and returned to the office, observations were manually recorded on survey forms and returned back to the office within 24 hours of the data collection. This manual method was chosen due to concerns with computer screen visibility in sunlight or rainy conditions. The WSU-TRG believes that the manual method also increases the accuracy and data verification at the time of data entry.

#### 5.0 DATA ANALYSIS

The data collected in the field was computerized by a team member and verified for accuracy by the project engineer and supervisor. Rates for safety belt use were determined for each survey stratum, county, location, etc., as well as the statewide average. A 95 percent confidence interval for the estimate of safety belt use was determined in order to meet the guidelines of NHTSA.

#### 5.1 Weighted Safety Belt Use Calculations

The weighting by the number of vehicles observed with the total possible number of vehicles passing the observation point has been performed as described in the following calculations. First the number of vehicles observed at each intersection by the length of the observation time and then multiplying that value by a standard 50-minute observational period. This calculation provides the total number of vehicles that passed the observation point in a standard 50-minute period. The number of vehicles observed in the 10-minute volume count was then multiplied by 5 to represent the total number of vehicles available for observation. The total number of vehicles was then divided by the adjusted number of vehicles observed passing the observation point. The resulting factor was the volume weighting factor for that particular intersection. The total number of drivers and passengers belted and not belted were then multiplied by the weighting factor to obtain the total number of weighted drivers and passengers that were belted and not belted. The weighted overall safety belt use rate by stratum was then determined by dividing the total number of belted drivers and passengers by the total number of drivers and passengers. The following calculations further describe the procedure outlined above.

```
Wayne County, Haggerty and Ecorse intersection

Survey length = 60 minutes

Number of vehicles observed in 60 minutes = 157 vehicles

10-minute volume count = 90 vehicles
```

Standard 50-minute observational frequency (Adjusted number of vehicles) =

```
Number of vehicles observed
Survey length

x 50 minutes =

157 vehicles
60 minutes
x 50 minutes = 130.83 vehicles in 50 minutes
```

Total number of vehicles available for observation = 10-minute vehicle count x 5 = 90 vehicles x 5 intervals = 450 vehicles in 50 minutes

Intersection volume weighting factor =

$$\frac{\text{Total number of vehicles}}{\text{Adjusted number of vehicles}} = \frac{450}{130.83} = 3.44$$

The variance for each stratum was determined by following Cochran's equation outlined in the 1977 publication "Sampling Techniques, 3rd Edition". The variance calculation is as follows:

Variance = 
$$\frac{n}{n-1} \sum_{i} \left( \frac{g_i}{\sum g_k} \right)^2 (r_i - r)^2$$

In this formula, n represents the number of observation locations,  $g_i$  is the number of observations at each location,  $g_k$  is the total number of observations within a stratum,  $r_i$  is the safety belt use rate for each stratum and r is the overall safety belt use rate.

#### **5.2** Overall Statewide Safety Belt Use Calculations

The statewide weighted safety belt use rate was calculated by summing up the strata safety belt use rates, each multiplied by a vehicle miles of travel weighting factor for that stratum, divided by the sum of the vehicle miles of travel weighting factor. The four vehicle miles of travel totals were compared and Stratum 3 had the highest total, 23,930,076, and was assigned a factor of 1.0. The other three strata's weighting factors were determined by dividing the vehicle miles of travel for that stratum by Stratum 3's vehicle miles of travel. Stratum 1 was assigned a weighting factor equal to 22,048,241 VMT divided by 23,930,076 VMT in Stratum 3. Stratum 2 was assigned a weighting factor equal to 23,439,396 VMT in Stratum 2 divided by 23,930,076 VMT in Stratum 4 was assigned a weighting factor equal to 18,575,126 VMT in Stratum 4 divided by 23,930,076 VMT in Stratum 3. This produced a weighting factor for Stratum 1 of 0.92, for Stratum 2 of 0.98 and for Stratum 4 of 0.78. The total weighting factors equaled 3.68.

The overall statewide variance was calculated in a similar manner as the overall statewide safety belt use rate. The overall statewide variance was found by summing the product of each stratum's variance by the squared weighting factor and divided by the sum of the squared weighting factors.

The 95 percent confidence interval is equal to the weighted safety belt use rate plus/minus 1.96 (for the Z-test at alpha = 0.05) multiplied by the square root of the stratum's or statewide variance expressed as a percent. The standard error is equal to the square root of the variance. The relative error must be less than five percent according to NHTSA guidelines and is equal to the standard error divided by the weighted statewide safety belt use rate.

The data was also analyzed and compared with studies from previous years to assess the progress of the safety belt campaign by the State of Michigan.

#### 6.0 RESULTS AND CONCLUSIONS

#### **6.1** Statewide Observational Surveys

The observational survey for the pre-enforcement statewide sample was performed between Monday, May 2nd and Sunday, May 15th of 2006. During this observation period, a total of 14,807 vehicles were observed at 192 observation sites randomly selected to represent statewide safety belt use. In comparison with the 2005 sample, 643 fewer vehicles were observed in 2006. The smaller sample during this two-week period may have been attributable to the poor weather conditions.

The observational survey for the post-enforcement statewide sample was performed between Monday, June 4th and Sunday, June 18th of 2006. During this observation period, 16,750 vehicles were observed at the same 192 sites in comparison with the 2005 sample, 2,666 more vehicles were observed in 2006.

The overall weighted statewide safety belt use rates are shown in Table 3. The overall weighted statewide safety belt use rates were calculated based upon the procedure described in the "Overall Statewide Safety Belt Use Calculations" section in the Data Analysis section of the

report. The weighted percent of safety belt use referenced in the summary tables has been calculated per the "Weighted Safety Belt Use Calculations" also detailed in the Data Analysis section of this report.

Table 3. Statewide Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers

Observational Wave	Safety Belt Use Rate	Standard Error	Relative Error
Pre-Enforcement Statewide	89.9% ± 1.26%	0.64%	0.72%
Post-Enforcement Statewide	94.0% ± 1.27%	0.60%	0.69%

The findings for the statewide observational surveys for the strata are shown in Table 4. Additional breakdowns of the safety belt use rates and standard error on a county level are provided in Appendix II. Complete details of the observations on an intersection level are provided in Appendix III.

Table 4. Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum

Stratum	Pre-Enforcem Safety B	ent Statewide Selt Rate	Post-Enforcement Statewide Safety Belt Use Rate		
Stratum	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error	
Stratum 1	$90.6\% \pm 2.45\%$	1.24%	$95.6\% \pm 0.77\%$	0.39%	
Stratum 2	$91.0\% \pm 1.69\%$	0.86%	$94.7\% \pm 0.99\%$	0.50%	
Stratum 3	$88.7\% \pm 2.07\%$	1.06%	$91.4\% \pm 1.9\%$	0.97%	
Stratum 4	89.1% ± 1.87%	0.96%	$94.5\% \pm 1.04\%$	0.53%	

<sup>\*</sup> Weighted Safety Belt Usage ± 95% Confidence Band

Table 5 summarizes the descriptive statistics regarding the observational surveys in terms of day of the week and time of the day for each of the statewide observational surveys.

**Table 5. Statewide Descriptive Statistics** 

	Pre-Enforcement Statewide			Post-Enforcement Statewide			wide	
Day of the Week	No. of Sites Observed	Percent of Sites in Day of Week	Actual Total No. of Observations	Percent of Observa- tions in Day of Week	No. of Sites Observed	Percent of Sites in Day of Week	Actual Total No. of Observations	Percent of Observa- tions in Day of Week
Sunday	20	10.4%	1,141	7.7%	22	11.5%	1,412	8.4%
Monday	25	13.0%	2,140	14.5%	24	12.5%	2,186	13.1%
Tuesday	22	11.5%	1,663	11.2%	22	11.5%	2,277	13.6%
Wednesday	41	21.4%	3,234	21.8%	40	20.8%	3,746	22.4%
Thursday	39	20.3%	3,158	21.3%	40	20.7%	3,515	21.0%
Friday	24	12.5%	1,702	11.5%	22	11.5%	1,846	11.0%
Saturday	21	10.9%	1,769	11.9%	22	11.5%	1,768	10.6%
Total	192	100%	14,807	100%	192	100%	16,750	100%
Time of the Day	No. of Sites Observed	Percent of Sites in Time of Day	Actual Total No. of Observations	Percent of Observa- tions in Time of Day	No. of Sites Observed	Percent of Sites in Time of Day	Actual Total No. of Observations	Percent of Observa- tions in Time of Day
7 am – 8 am	7	3.7%	564	3.8%	1	0.5%	96	0.6%
8 am – 9 am	11	5.7%	901	6.1%	10	5.2%	923	5.5%
9 am – 10 am	14	7.3%	1,049	7.1%	15	7.8%	1,281	7.6%
10 am – 11 am	21	10.9%	1,663	11.2%	21	10.9%	1,882	11.2%
11 am – 12 pm	22	11.5%	1,615	10.9%	23	12.0%	2,058	12.3%
12 pm – 1 pm	23	12.0%	1,681	11.4%	23	12.0%	2,057	12.3%
1 pm – 2 pm	19	9.9%	1,460	9.9%	25	13.0%	2,153	12.9%
2 pm – 3 pm	26	13.5%	2,044	13.8%	24	12.5%	1,997	11.9%
3 pm – 4 pm	20	10.4%	1,529	10.3%	22	11.5%	1,837	11.0%
4 pm – 5 pm	14	7.3%	1,183	8.0%	18	9.4%	1,515	9.0%
5 pm – 6 pm	10	5.2%	795	5.4%	6	3.1%	545	3.3%
6 pm – 7 pm	5	2.6%	323	2.2%	4	2.1%	406	2.4%
Total	192	100%	14,807	100%	192	100%	16,750	100%

The safety belt use rate can be described for the statewide surveys by the overall use rate, by stratum, by vehicle type and by various demographics. Table 6 summarizes pre and postenforcement safety belt use rate for the statewide survey by driver, front-seat passenger and total observations. As shown in Table 6, driver safety belt use increased by 4.5 percent and front-seat passenger safety belt use increased by 4.9 percent. The increase for all safety belt use was 4.6 percent. The amount of safety belt misuse between the two surveys amounts to a very small percentage of overall use. It should be noted that the weighted safety belt use rates provided in the following tables (Tables 6 through 12) vary from those provided in Table 3. Table 3 utilized the "Overall Statewide Safety Belt Use Calculations" as described in the Data Analysis Section of this report. The overall statewide weighted safety belt use percentages are calculated by weighting the safety belt use rates by VMT by stratum. The weighted safety belt use rates provided in Tables 4 and 6 through 12 are calculated based upon the "Weighted Safety Belt Use Calculations", as described in the Data Analysis Section of this report. The weighted safety belt use percentages are calculated by utilizing the intersection weighting factor as previously defined. As the data presented in these tables are not subdivided by county or strata, the overall state weighted safety belt use rates utilizing the VMT calculation are not applicable.

Table 6. Statewide Safety Belt Use Summary

	Pre	Statewide -Enforcemen	t	Statewide Post-Enforcement			
Driver Belt Use	Actual Total # of Observations	Weighted Total # of Observatio ns	Weighted Percent of Safety Belt Use	Actual Total # of Observations	Weighted Total # of Observations	Weighted Percent of Safety Belt Use	
Not Belted	1,551	5,035	9.6%	1,032	2,636	5.0%	
Belted	13,221	47,508	90.2%	15,678	50,137	94.7%	
Belted Under Arm	20	70	0.1%	27	94	0.2%	
Belted Behind Back	15	30	0.1%	13	50	0.1%	
Total	14,807	52,643	100%	16,750	52,917	100%	
Passenger Belt Use	Actual Total # of Observations	Weighted Total # of Observatio ns	Weighted Percent of Safety Belt Use	Actual Total # of Observations	Weighted Total # of Observations	Weighted Percent of Safety Belt Use	
Not Belted	414	1,443	12.3%	264	799	7.3%	
Child Seat	5	15	0.1%	11	19	0.2%	
Belted	3,005	10,240	87.1%	3,426	10,037	92.0%	
Belted Under Arm	9	22	0.2%	4	13	0.1%	
Belted Behind Back	22	38	0.3%	17	37	0.4%	
Total	3,455	11,758	100%	3,722	10,904	100%	

**Table 6. Statewide Safety Belt Use Summary (Continued)** 

	Statewide Pre-Enforcement			Statewide Post-Enforcement		
Total Belt Use	Actual Total # of Observations	Weighted Total # of Observations	Weighted Percent of Safety Belt Use	Actual Total # of Observations	Weighted Total # of Observations	Weighted Percent of Safety Belt Use
Not Belted	1,965	6,478	10.1%	1,296	3,435	5.4%
Child Seat	5	15	0.0%	11	18	0.0%
Belted	16,226	57,748	89.7%	19,104	60,174	94.3%
Belted Under Arm	29	92	0.1%	31	107	0.2%
Belted Behind Back	37	68	0.1%	30	87	0.1%
Total	18,262	64,401	100%	20,472	63,821	100%

Table 7 summarizes the statewide driver and front-seat passenger safety belt use rates for pre and post-enforcement campaigns by stratum and county. In Table 7, the counties are listed by stratum. All four strata experienced an increase in safety belt use, with Stratum 4 or Wayne County experiencing the highest improvement of 5.4 percent. Each county experienced increases in safety belt use rates.

Because of the relatively low number of sites and/or observations in many counties, the safety belt use rates listed may not be fully representative of each county. The use rates indicated are the weighted average of the observations taken in each county.

Table 7. Statewide Safety Belt Use Rates by Stratum and County

	All Vehicles Safety Belt Use						
	Statewi	ide Pre-Enforc	ement	Statewide Post-Enforcement			
Stratum 1	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	
Ingham County	1,202	4,372	92.2%	1,609	4,806	95.3%	
Kalamazoo County	825	1,189	92.3%	720	1,410	95.9%	
Oakland County	990	5,234	86.9%	1,245	4,978	95.2%	
Washtenaw County	873	2,934	94.1%	1,292	3,328	96.7%	
Total	3,890	13,729	90.6%	4,866	14,522	95.6%	

Table 7. Statewide Safety Belt Use Rates by Stratum and County (Continued)

Table 7. Statewide Safety Belt Use Rates by Stratum and County (Continued)  Statewide Pre-Enforcement Statewide Post-Enforcement										
	Actual	Weighted	ement	Actual	Weighted	ement				
Stratum 2	Total # of	Total # of	Weighted	Total # of	Total # of	Weighted				
	Observations	Observations	% of SBU	Observations	Observations	% of SBU				
Allegan County	328	1,293	96.4%	376	1,007	96.8%				
Bay County	280	600	94.5%	321	448	96.0%				
Eaton County	715	1,201	92.4%	684	1,323	96.5%				
Grand Traverse	99	808	91.0%	108	408	98.3%				
Jackson County	346	681	94.6%	378	863	95.2%				
Kent County	1,175	2,010	84.7%	854	1,306	94.7%				
Livingston County	582	1,490	87.9%	598	1,199	92.1%				
Macomb County	595	2,185	94.3%	538	1,462	94.6%				
Midland County	483	490	85.5%	365	452	90.9%				
Ottawa County	182	311	90.7%	228	275	87.6%				
Total	4,785	11,069	91.0%	4,450	8,743	94.7%				
Stratum 3	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU				
Berrien County	395	496	84.3%	408	359	85.0%				
Calhoun County	349	1,305	94.6%	417	1,402	96.9%				
Clinton County	588	419	78.0%	626	591	89.2%				
Genesee County	379	742	94.3%	431	1,646	88.9%				
Ionia County	342	601	87.0%	241	502	92.6%				
Isabella County	201	210	84.8%	147	425	85.6%				
Lapeer County	126	205	71.2%	201	372	94.9%				
Lenawee County	285	1,005	87.2%	291	788	93.0%				
Marquette County	217	171	80.7%	208	221	83.7%				
Monroe County	420	667	94.5%	585	556	92.4%				
Montcalm County	344	434	80.0%	255	348	91.7%				
Muskegon County	279	293	74.4%	327	414	83.3%				
Saginaw County	59	124	93.5%	69	103	89.3%				
Shiawassee County	202	463	94.0%	265	694	94.8%				
St. Clair County	162	444	95.5%	253	671	94.5%				
St. Joseph County	168	318	82.7%	264	397	85.4%				
Van Buren County	350	522	94.3%	366	778	93.7%				
Total	4,866	8,419	88.7%	5,354	10,267	91.4%				
Stratum 4	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU				
Wayne County	4,721	31,184	89.1%	5,802	30,289	94.5%				

Tables 8 through 12 summarize occupant safety belt use by vehicle type for the day of the week, time of the day, gender, age and race for the statewide survey.

**Table 8. All Vehicles Statewide Summary** 

	All Vehicles Safety Belt Use								
	Statewi	ide Pre-Enforce	nent	Statev	vide Post-Enforc	ement			
Day of the Week	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU			
Sunday	1,568	2,432	92.0%	1,845	3,032	95.4%			
Monday	2,629	12,027	89.9%	2,664	13,881	94.3%			
Tuesday	1,962	5,432	89.2%	2,719	5,502	94.1%			
Wednesday	3,832	17,331	87.8%	4,457	17,220	94.7%			
Thursday	3,786	16,987	90.6%	4,170	14,620	93.5%			
Friday	2,132	4,946	90.5%	2,269	4,765	94.6%			
Saturday	2,353	5,246	91.2%	2,348	4,801	94.7%			
Total	18,262	64,401	89.7%	20,472	63,821	94.3%			
Time of Day	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU			
7 am – 8 am	696	2,280	85.2%	103	458	94.1%			
8 am – 9 am	1,072	2,190	90.2%	1,085	3,459	94.4%			
9 am – 10 am	1,276	4,417	90.6%	1,544	4,309	95.5%			
10 am – 11 am	2,087	7,492	92.7%	2,325	6,583	93.5%			
11 am – 12 pm	1,975	7,359	91.5%	2,520	6,555	95.3%			
12 pm – 1 pm	2,067	7,221	90.6%	2,495	6,953	93.5%			
1 pm – 2 pm	1,825	4,354	91.9%	2,643	8,715	93.7%			
2 pm – 3 pm	2,514	7,607	88.2%	2,448	7,016	94.9%			
3 pm – 4 pm	1,882	8,481	89.1%	2,225	7,816	94.9%			
4 pm – 5 pm	1,441	5,402	88.4%	1,899	6,375	94.4%			
5 pm – 6 pm	1,027	7,702	89.0%	669	2,705	94.7%			
6 pm – 7 pm	400	3,196	83.0%	516	2,877	92.1%			
Total	18,262	64,401	89.7%	20,472	63,821	94.3%			
Vehicle Type	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU			
Passenger Cars	8,391	31,549	89.9%	9,928	32,921	94.4%			
Sport Utility	3,418	12,974	91.7%	3,840	12,481	96.2%			
Vans/Minivans	2,592	8,902	91.9%	2,759	8,409	94.8%			
Pick-up Trucks	3,861	10,976	85.0%	3,945	10,010	91.1%			
Total	18,262	64,401	89.7%	20,472	63,821	94.3%			

Table 8. All Vehicles Statewide Summary (Continued)

	Statew	ide Pre-Enforce	ment	Statewide Post-Enforcement			
Gender	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	
Male	10,386	36,367	87.7%	11,279	34,574	93.0%	
Female	7,876	28,034	92.3%	9,193	29,247	95.9%	
Total	18,262	64,401	89.7%	20,472	63,821	94.3%	
Age	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	
0-3	9	40	97.5%	17	56	89.7%	
4-15	398	1,309	88.5%	370	1,092	90.1%	
16-29	4,610	18,513	86.7%	5,091	17,114	93.4% 94.6%	
30-59	11,101	38,003	90.3%	12,948	38,904		
60+	2,144	6,536	94.8%	2,046	6,655	95.6%	
Total	18,262	64,401	89.7%	20,472	63,821	94.3%	
Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	
Caucasian	16,085	50,942	90.6%	17,861	50,884	95.0%	
African American	1,628	10,838	85.5%	2,003	10,613	91.1%	
Asian or Pacific Islander	426	426 2,318 90.3% 453 1,961		1,961	94.4%		
Hispanic	111	288	90.3%	150	358	93.8%	
Native American	12	15	86.7%	5	5	80.2%	
Total	18,262	64,401	89.7%	20,472	63,821	94.3%	

 Table 9. Passenger Cars Statewide Summary

	Passenger Cars Safety Belt Use							
	Statewide Pre-Enforcement			Statev	vide Post-Enforc	ement		
Day of the Week	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
Sunday	736	1,133	91.7%	817	1,391	96.8%		
Monday	1,194	5,834	89.4%	1,348	7,406	93.1%		
Tuesday	779	2,256	90.7%	1,269	2,665	95.2%		
Wednesday	1,776	8,659	88.5%	2,160	9,009	95.2%		
Thursday	1,871	8,876	89.8%	2,092	7,796	93.6%		
Friday	934	2,255	91.4%	1,110	2,320	96.0%		
Saturday	1,101	2,536	93.0%	1,132	2,334	95.0%		
Total	8,391	31,549	89.9%	9,928	32,921	94.4%		

**Table 9. Passenger Cars Statewide Summary (Continued)** 

	Statew	vide Pre-Enforce	ement	Statev	vide Post-Enforc	ement
Time of Day	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
7 am – 8 am	305	1,001	87.3%	48	214	95.8%
8 am – 9 am	496	1,055	91.0%	525	1,749	93.1%
9 am – 10 am	568	2,025	92.3%	705	2,096	96.2%
10 am – 11 am	945	3,723	92.4%	1,105	3,346	94.0%
11 am – 12 pm	845	3,270	94.6%	1,251	3,352	95.6%
12 pm – 1 pm	904	3,224	93.0%	1,134	3,309	92.5%
1 pm – 2 pm	820	2,023	93.4%	1,275	4,503	94.0%
2 pm – 3 pm	1,153	4,026	86.6%	1,233	3,679	95.4%
3 pm – 4 pm	862	3,994	89.5%	1,045	3,810	97.6%
4 pm – 5 pm	713	2,839	87.7%	898	3,320	94.8%
5 pm – 6 pm	547	2,376	88.8%	363	1,599	97.0%
6 pm – 7 pm	233	1,993	78.8%	346	1,944	91.1%
Total	8,391	31,549	89.9%	9,928	32,921	94.4%
Gender	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
Male	4,367	16,820	88.1%	4,933	16,401	93.6%
Female	4,024	14,729	91.9%	4,995	16,520	95.3%
Total	8,391	31,549	89.9%	9,928	32,921	94.4%
Age	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
0-3	6	24	95.8%	5	19	68.9%
4-15	147	505	84.8%	145	496	85.3%
16-29	2,708	10,978	86.1%	3,180	10,637	93.3%
30-59	4,385	16,325	91.5%	5,389	17,684	95.0%
60+	1,145	3,717	94.8%	1,209	4,085	96.1%
Total	8,391	31,549	89.9%	9,928	32,921	94.4%
Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
Caucasian	7,088	22,998	91.8%	8,273	24,531	95.6%
African American	994	6,987	83.0%	1,301	6,961	90.4%
Asian or Pacific Islander	263	1,441	91.7%	276	1,218	94.8%
Hispanic	39	116	93.9%	76	209	94.2%
Native American	7	7	87.5%	2	2	50.0%
Total	8,391	31,549	89.9%	9,928	32,921	94.4%

**Table 10. Sport Utility Vehicles Statewide Summary** 

		Spor	t Utility Vehic	cles Safety Belt U	Jse	
	Statew	ide Pre-Enforce	ment	Statewi	de Post-Enforce	ment
Day of the Week	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
Sunday	302	489	93.5%	347	562	95.7%
Monday	458	2,461	92.8%	468	2,659	98.9%
Tuesday	326	943	91.5%	458	990	95.3%
Wednesday	780	3,722	89.7%	942	3,776	95.9%
Thursday	784	3,497	92.3%	772	2,673	94.7%
Friday	383	969	92.3%	410	893	95.5%
Saturday	385	893	92.8%	443	928	96.0%
Total	3,418	12,974	91.7%	3,840	12,481	96.2%
Time of the Day	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
7 am – 8 am	133	585	85.5%	15	67	93.3%
8 am – 9 am	190	420	94.5%	223	756	96.5%
9 am – 10 am	230	902	94.5%	339	944	97.1%
10 am – 11 am	466	1,774	94.4%	416	1,244	94.9%
11 am – 12 pm	357	1,486	94.1%	502	1,387	96.5%
12 pm – 1 pm	399	1,514	89.0%	500	1,545	97.0%
1 pm – 2 pm	339	856	92.0%	494	1,698	96.7%
2 pm – 3 pm	288	1,122	89.8%	350	1,235	95.7%
3 pm – 4 pm	180	839	87.1%	123	559	92.5%
4 pm – 5 pm	288	1,122	89.8%	350	1,235	95.7%
5 pm – 6 pm	180	839	87.1%	123	559	92.5%
6 pm – 7 pm	77	655	92.8%	78	429	98.4%
Total	3,418	12,974	91.7%	3,840	12,481	96.2%
Gender	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
Male	1,677	6,447	90.8%	1,765	5,704	95.2%
Female	1,741	6,527	92.6%	2,075	6,777	97.0%
Total	3,418	12,974	91.7%	3,840	12,481	96.2%
Age	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
0-3	1	11	100%	3	8	100%
4-15	97	389	91.8%	85	251	98.5%
16-29	819	3,689	90.3%	771	2,875	95.4%
30-59	2,228	7,915	81.7%	2,712	8,400	96.3%
60+	273	970	86.2%	269	947	97.1%
Total	3,418	12,974	91.7%	3,840	12,481	96.2%

**Table 10. Sport Utility Vehicles Statewide Summary (Continued)** 

	Statew	ide Pre-Enforce	ment	Statewide Post-Enforcement			
Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	
Caucasian	3,043	10,681	91.8%	3,374	10,265	96.9%	
African American	276	1,816	90.8%	346	1,766	91.9%	
Asian or Pacific Islander	79	430	90.7%	96	403	95.2%	
Hispanic	18	43	100%	23	46	100%	
Native American	2	4	100%	1	1	100%	
Total	3,418	12,974	91.7%	3,840	12,481	96.2%	

Table 11. Vans/Minivans Statewide Summary

		Ţ	Vans/Minivans	Safety Belt Use		
		vide Pre-Enforce	ement		ide Post-Enforce	ement
Day of the Week	Actual Total # of Observations	Total # of Total # of Weighted		Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
Sunday	218	310	93.2%	264	452	97.8%
Monday	403	1,597	92.7%	349	1,726	95.0%
Tuesday	280	894	87.5%	356	656	92.5%
Wednesday	528	2,463	89.7%	621	2,312	95.7%
Thursday	490	2,170	95.1%	544	1,934	93.8%
Friday	323	675	93.0%	921	683	93.9%
Saturday	350	793	92.1%	304	646	95.4%
Total	2,592	8,902	91.9%	2,759	8,409	94.8%
Time of the Day	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
7 am – 8 am	139	390	85.4%	28	124	92.7%
8 am – 9 am	211	370	81.1%	192	527	94.1%
9 am – 10 am	297	913	83.8%	286	663	90.5%
10 am – 11 am	384	1,023	90.8	457	1,088	90.7%
11 am – 12 pm	447	1,416	81.3%	435	942	90.8%
12 pm – 1 pm	477	1,418	84.5%	518	1,163	90.4%
1 pm – 2 pm	395	823	86.9%	528	1,410	89.3%
2 pm – 3 pm	601	1,310	85.2%	484	1,261	91.5%
3 pm – 4 pm	418	1,597	84.3%	472	1,412	93.1%
4 pm – 5 pm	261	808	86.1%	398	970	94.0%
5 pm – 6 pm	174	612	87.4%	110	256	90.6%
6 pm – 7 pm	57	296	82.4%	37	194	82.0%
Total	2,592	8,902	91.9%	2,759	8,409	94.8%

Table 11. Vans/Minivans Statewide Summary (Continued)

	Statew	vide Pre-Enforce	ement	Statew	Statewide Post-Enforcement			
Gender	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
Male	1,279	4,368	89.7%	1,371	4,270	92.8%		
Female	1,313	4,534	94.1%	1,388	4,139	96.9%		
Total	2,592	8,902	91.9%	2,759	8,409	94.8%		
Age	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
0-3	0	0	100%	4	16	100%		
4-15	94	273	92.3%	90	238	89.3% 95.2% 95.2% 92.9%		
16-29	345	1,471	93.3%	372	1,337			
30-59	1,856	6,224	90.9%	2,017	5,892			
60+	297	934	95.9%	276	926			
Total	2,592	8,902	91.9%	2,759	8,409	94.8%		
Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
Caucasian	2,299	7,219	92.3%	2,464	6,946	95.4%		
African American	219	1,369	91.5%	214	1,138	91.6%		
Asian or Pacific Islander	45	261	81.6%	61	291	94.1%		
Hispanic	26	49	100%	19	33	80.6%		
Native American	3	4	75.0%	1	1	100%		
Total	2,592	8,902	91.9%	2,759	8,409	94.8%		

Table 12. Pick-up Trucks Statewide Summary

		I	Pick-up Trucks	Safety Belt Use		
	Statev	vide Pre-Enforce	ement	Statew	ide Post-Enforce	ement
Day of the Week	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU			Weighted % of SBU
Sunday	312	500	90.4%	417	627	90.6%
Monday	574	2,135	85.8%	499	2,090	92.2%
Tuesday	577	1,339	86.3%	636	1,191	91.4%
Wednesday	748	2,487	80.2%	734	2,123	89.4%
Thursday	641	2,444	87.2%	762	2,217	91.5%
Friday	492	1,047	85.5%	428	869	90.3%
Saturday	517	1,024	84.6%	469 893		92.4%
Total	3,861	10,976	85.0%	3,945	10,010	91.1%

Table 12. Pick-up Trucks Statewide Summary (Continued)

Statewide Pre-Enforcement Statewide Post-Enforcement								
Time of Day	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
7 am – 8 am	139	390	85.4%	28	124	92.7%		
8 am – 9 am	211	370	81.1%	192	527	94.1%		
9 am – 10 am	297	913	83.8%	286	663	90.5%		
10 am – 11 am	384	1,023	90.8%	457	1,088	90.7%		
11 am – 12 pm	447	1,416	81.3%	435	942	90.8%		
12 pm – 1 pm	477	1,418	84.5%	518	1,163	90.4%		
1 pm – 2 pm	395	823	86.9%	528	1,410	89.3%		
2 pm – 3 pm	601	1,310	85.2%	484	1,261	91.5%		
3 pm – 4 pm	418	1,597	84.3%	472	1,412	93.1%		
4 pm – 5 pm	261	808	86.1%	398	970	94.0%		
5 pm – 6 pm	174	612	87.4%	110	256	90.6%		
6 pm – 7 pm	57	296	82.4%	37	194	82.0%		
Total	3,861	10,976	85.0%	3,945	10,010	91.1%		
Gender	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
Male	3,063	8,732	83.8%	3,210	8,199	90.4%		
Female	798	2,244	89.7%	735	1,811	94.6%		
Total	3,861	10,976	85.0%	3,945	10,010	91.1%		
Age	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
0-3	2	5	100%	5	13	100%		
4-15	60	142	85.9%	50	107	94.5%		
16-29	738	2,375	79.9%	768	2,265	90.5%		
30-59	2,632	7,539	85.8%	2,830	6,928	90.9%		
60+	429	915	91.2%	292	697	94.5%		
Total	3,861	10,976	85.0%	3,945	10,010	91.1%		
Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU		
Caucasian	3,655	10,044	85.0%	3,750	9,142	90.9%		
African American	139	666	84.5%	142	748	94.2%		
Asian or Pacific Islander	39	186	90.9%	20	49	77.3%		
Hispanic	28	80	75.3%	32	70	94.9%		
Native American	0	0	100%	1	1	100%		
Total	3,861	10,976	850%	3,945	10,010	91.1%		

Overall, the occupants of sport utility vehicles have the highest safety belt use rates. The usage rate for the sport utility vehicles increased in 2006 by 2.6 percent from the 2005 usage rate of 93.6 percent. Pick-up truck drivers and passengers have the lowest overall safety belt use rate of 91.1 percent; however, they increased their usage by 6.1 percent between the two observation waves. During the 2005 campaign, the highest pick-up truck safety belt use rate of 89.4 percent was recorded. Therefore, the pick-up truck occupants increased their safety belt usage by 1.7 percent between 2005 and 2006. In 2005, the highest van/minivan safety belt use rate of 95.4 percent was recorded. The usage rate has decreased for the van/minivan category by 0.6 percent between 2005 and 2006.

In general, safety belt use rates were higher on Sunday when compared to the other days of the week. The safety belt use rates varied by time of day with mid-morning having slightly higher usage rates. Again, female occupants have higher use rates than their male counterparts by nearly 3 percent. Occupants under the age of 30 years were the lowest safety belt users. The use percentages increased for the occupants between 30 to 59 years of age and increased again slightly for occupants 60 years of age and older. The age trends were similar to the 2005 age trends with each age bracket slightly increasing their safety belt use. In general, Caucasian and Asian drivers have slightly higher safety belt use rates than the African American and Hispanic drivers. The low sample of Native American drivers does not allow conclusions to be drawn regarding their usage. The ethnicity trends of 2006 are similar to those experienced in 2005.

Tables 13 through 17 summarize occupant safety belt use rates by vehicle type demographically subdivided by gender and age. Demographically, all races of males and females increased their safety belt usage for those races, which have a large sample from which to draw conclusions. Caucasian male pick-up truck occupants continue to have the lowest rates of safety belt use. In general, African American male and female occupants have lower safety belt use rates than those Caucasian occupants. This would indicate that continuing programs in urban centers may improve safety belt use rates.

Table 13. All Vehicles Statewide Demographic Summary

T.	Demograpl	nia Data		A	Il Vehicle Saf	ety Belt Use		
L	emograpi	iic Data	Statew	ide Pre-Enfor	cement	Statewic	de Post-Enfo	rcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
		Caucasian	4	7	85.7%	9	32	65.6%
	0.2	African American	0	0	-	2	11	63.6%
	0-3	Asian or Pacific Islander	1	11	100%	1	1	0.0%
		Total	5	18	94.4%	12	44	63.6%
		Caucasian	183	536	92.4%	189	521	89.6%
		African American	31	186	68.3%	30	153	91.5%
	4-15	Asian or Pacific Islander	6	40	60.0%	2	14	35.7%
		Hispanic	3	3	66.7%	0	0	0.0%
		Total	223	765	84.7%	221	688	89.0%
		Caucasian	2,028	6,683	85.0%	2,166	6,227	93.2%
		African American	343	2,435	79.0%	302	1,618	83.2%
	16-29	Asian or Pacific Islander	92	516	85.5%	85	343	94.5%
		Hispanic	21	70	91.4%	48	82	90.2%
Male		Native American	3	5	80.0%	0	0	0.0%
		Total	2,487	9,709	83.5%	2,601	8,270	91.2%
	-	Caucasian	5,695	18,001	89.0%	6,405	17,632	93.6%
		African American	513	3,156	86.1%	661	3,397	92.6%
	30-59	Asian or Pacific Islander	170	882	90.2%	190	844	93.8%
		Hispanic	51	131	87.0%	49	140	95.0%
		Native American	2	2	100%	1	1	100%
		Total	6,431	22,172	88.6%	7,306	22,014	93.5%
		Caucasian	1,190	3,393	95.2%	1,072	3,228	95.0%
		African American	40	259	87.6%	57	299	96.7%
	60+	Asian or Pacific Islander	9	48	100%	8	25	76.0%
	[	Hispanic	1	3	100%	1	5	100%
		Native American	0	0	-	1	1	0.0%
		Total	1,240	3,703	94.7%	1,139	3,558	94.9%
		TOTAL	10,386	36,367	87.7%	11,279	34,574	93.0%

Table 13. All Vehicles Statewide Demographic Summary (Continued)

Demographic Data			All Vehicle Safety Belt Use					
			Statewide Pre-Enforcement			Statewide Post-Enforcement		
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Female	0-3	Caucasian	3	12	100%	4	10	50.0%
		African American	1	10	100%	1	2	0.0%
		Total	4	22	100%	5	12	41.7%
	4-15	Caucasian	153	426	93.2%	126	299	93.6%
		African American	19	104	95.2%	21	96	84.4%
		Asian or Pacific Islander	3	14	100%	1	4	100%
		Hispanic	0	0	-	1	5	100%
		Total	175	544	93.8%	149	404	91.6%
	16-29	Caucasian	1,754	6,121	86.2%	2,056	6,464	96.8%
		African American	300	2,331	87.5%	353	2,053	91.6%
		Asian or Pacific Islander	59	333	94.0%	61	276	94.9%
		Hispanic	8	19	94.7%	19	50	100%
		Native American	2	0	-	1	1	100%
		Total	2,123	8,804	86.9%	2,490	8,844	95.5%
	30-59	Caucasian	4,193	13,054	92.9%	4,962	13,562	96.7%
		African American	362	2,235	91.8%	547	2,825	92.9%
		Asian or Pacific Islander	86	474	94.3%	101	433	97.5%
		Hispanic	25	61	96.7%	30	68	92.6%
		Native American	4	7	100%	2	2	100%
		Total	4,670	15,831	92.8%	5,642	16,890	96.1%
	60+	Caucasian	882	2,709	91.8%	872	2,909	96.7%
		African American	19	122	85.2%	29	159	96.9%
		Asian or Pacific Islander	0	0	-	4	21	100%
		Hispanic	2	1	200.0%	2	8	100%
		Native American	1	1	50.0%	0	0	-
		Total	904	2,833	91.6%	907	3,097	96.7%
		TOTAL	7,876	28,034	92.3%	9,193	29,247	95.9%

Table 14. Passenger Cars Statewide Demographic Summary

1	Domogra	phic Data		Pa	ssenger Cars	Safety Belt	Use	
J	Demogra	pine Data	Statewi	de Pre-Enfo	rcement	Statewi	de Post-Enfo	rcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
		Caucasian	3	4	75.0%	4	15	46.7%
	0-3	African American	0	0	-	1	4	20.5%
		Total	3	4	75.0%	5	19	36.8%
		Caucasian	62	172	90.7%	72	226	84.1%
		African American	18	106	65.1%	18	90	85.6%
	4-15	Asian or Pacific Islander	2	14	14.3%	0	0	-
		Hispanic	1	1	100%	0	0	-
		Total	83	293	77.8%	90	316	84.5%
		Caucasian	1,034	3,239	85.5%	1,174	3,230	93.8%
	16-29	African American	239	1,818	74.4%	212	1,137	80.9%
		Asian or Pacific Islander	72	394	85.0%	60	255	96.9%
		Hispanic	12	41	87.8%	25	43	86.0%
3.6.1		Native American	2	3	66.7%	0	0	-
Male		Total	1,359	5,495	81.8%	1,471	4,665	90.7%
		Caucasian	1,968	6,787	92.4%	2,252	6,807	95.0%
		African American	265	1,784	82.6%	385	2,020	93.8%
	30-59	Asian or Pacific Islander	92	469	93.8%	118	544	95.4%
		Hispanic	13	31	96.8%	18	74	94.6%
		Native American	1	0	-	0	0	-
		Total	2,339	9,071	90.5%	2,773	9,445	94.8%
		Caucasian		1,763	96.7%	553	1,752	96.2%
		African		, , , , , , , , , , , , , , , , , , ,			<u> </u>	
		American	25	146	84.2%	35	186	96.8%
	60.	Asian or Pacific						
	60+	Islander	9	48	100%	4	12	50.0%
		Hispanic	0	0	-	1	5	100%
		Native American	0	0	-	1	1	100%
		Total	583	1,957	95.9%	594	1,956	96.0%
		TOTAL	4,367	16,820	88.1%	4,933	16,401	93.6%

Table 14. Passenger Cars Statewide Demographic Summary (Continued)

	Domog	raphic Data		Pass	senger Car	s Safety Be	lt Use	
	Demog	гарис Фата	Statewid	e Pre-Enfo	rcement	Statewic	de Post-Enf	orcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
		Caucasian	2	10	100%	0	0	-
	0-3	African American	1	10	100%	0	0	-
		Total	3	20	100%	0	0	-
		Caucasian	55	148	91.9%	42	123	91.9%
	4-15	African American	8	62	100%	12	53	73.6%
	7 13	Asian or Pacific Islander	l I	2	100%	1	4	100%
		Total	64	212	94.3%	55	180	86.7%
-		Caucasian	1,084	3,518	83.1%	1,392	4,224	96.8%
	16-29	African American	215	1,713	87.4%	266	1,559	91.6%
		Asian or Pacific Islander	1 47	236	95.3%	35	143	90.2%
	•	Hispanic	6	16	93.8%	16	46	100%
		Native American		0	-	0	0	-
Female		Total	1,349	5,483	85.0%	1,709	5,972	95.3%
		Caucasian	1,780	5,658	92.7%	2,196	6,169	96.3%
		African American	212	1,287	91.1%	350	1,791	91.8%
	30-59	Asian or Pacific Islander	1 45	278	97.1%	55	244	95.5%
	•	Hispanic		27	100%	14	34	94.1%
	•	Native American		4	100%	1	1	100%
	•	Total	2,046	7,254	92.6%	2,616	8,239	95.3%
-		Caucasian	551	1,699	94.5%	588	1,985	96.5%
		African American	11	61	70.5%	22	121	95.9%
	60+	Asian or Pacific Islander	()	0	-	3	16	83.6%
		Hispanic	0	0	-	2	7	83.6%
		Total	562	1,760	93.7%	615	2,129	96.5%
	l.	TOTAL	4,024	14,729	91.9%	4,995	16,520	95.3%

Table 15. Sport Utility Vehicles Statewide Demographic Summary

D	om o ononi	hia Data		Sport	t Utility Vehi	icle Safety B	elt Use	
D	emograpl	iiic Data	Statewi	de Pre-Enfo	rcement	Statewic	de Post-Enfo	rcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	Asian or Pacific Islander	1	11	100%	1	1	0.0%
		Total	1	11	100%	1	1	0.0%
		Caucasian	52	195	95.4%	48	139	97.8%
		African American	5	55	74.5%	7	33	100%
	4-15	Asian or Pacific Islander	2	5	20.0%	0	0	-
		Total	59	255	89.4%	55	172	98.3%
		Caucasian	323	1,301	88.3%	266	901	96.0%
	16-29	African American	49	318	95.3%	44	215	90.7%
		Asian or Pacific Islander	11	63	88.9%	13	41	100%
		Hispanic	2	13	100%	8	10	100%
Male		Native American	1	2	100%	0	0	0.0%
		Total	386	1,697	89.7%	331	1,167	95.2%
		Caucasian	941	3,127	90.0%	1,080	3,154	96.1%
		African American	84	537	91.4%	105	507	89.3%
	30-59	Asian or Pacific Islander	37	229	90.0%	32	145	86.9%
		Hispanic	8	15	100%	7	16	100%
		Native American	1	2	100%	0	0	-
		Total	1,071	3,910	90.3%	1,224	3,822	94.9%
		Caucasian	157	544	98.3%	140	469	95.7%
		African American	3	30	100%	11	60	100%
	60+	Asian or Pacific Islander	0	0	-	3	13	100%
		Total	160	574	98.4%	154	542	96.3%
		TOTAL	1,677	6,447	90.8%	1,765	5,704	95.2%

Table 15. Sport Utility Vehicles Statewide Demographic Summary (Continued)

	Domograp	shia Data		Sport Utili	ty Vehicle	Safety B	elt Use	
	Demograp	onic Data	Statewide	Pre-Enfor	cement	Statewide	e Post-Enf	forcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	Caucasian	0	0	-	2	7	71.4%
	0 3	Total	0	0	-	2	7	71.4%
		Caucasian	32	107	95.3%	24	54	100%
		African American	5	21	100%	5	20	95.2%
	4-15	Asian or Pacific Islander	1	6	100%	0	0	-
		Hispanic	0	0	-	1	5	100%
		Total	38	134	96.3%	30	79	98.7%
	16-29	Caucasian	364	1,533	91.8%	368	1,305	97.1%
		African American	60	428	87.4%	53	320	88.1%
		Asian or Pacific Islander	8	30	90.0%	18	82	100%
Female		Hispanic	1	1	100%	0	0	-
		Native American	0	0	-	1	1	100%
		Total	433	1,992	90.9%	440	1,708	95.6%
		Caucasian	1,062	3,481	93.1%	1,334	3,850	97.8%
		African American	69	424	91.3%	118	592	94.6%
	30-59	Asian or Pacific Islander	19	86	96.5%	29	121	100%
		Hispanic	7	14	100%	7	15	100%
		Total	1,157	4,005	93.0%	1,488	4,578	97.4%
		Caucasian	112	393	70.2%	112	386	98.2%
	60+	African American	1	3	100%	3	19	100%
		Total	113	396	70.7%	115	405	98.3%
		TOTAL	1,741	6,527	92.6%	2,075	6,777	97.0%

Table 16. Vans/Minivans Statewide Demographic Summary

D	emograpl	hic Data		Vans	/Minivans	Safety Belt U	se	
D	emograpi	ilic Data	Statewid	e Pre-Enforce	ement	Statewide	e Post-Enforce	ement
Gender	Age	Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Total # of	Weighted Total # of Observations	Weighted % of SBU
		Caucasian	0	0	-	2	7	85.7%
	0-3	African American	0	0	-	1	7	100%
		Total	0	0	-	3	14	92.9%
		Caucasian	37	92	87.0%	39	94	88.3%
		African American	4	14	92.9%	4	23	100%
	4-15	Asian or Pacific Islander	2	21	100%	2	14	35.7%
		Hispanic	1	1	100%	0	0	-
		Total	44	128	89.8%	45	131	84.7%
		Caucasian	135	506	94.1%	150	478	95.6%
	16-29	African American	30	173	98.8%	24	128	86.7%
		Asian or Pacific Islander	3	30	70.0%	5	23	95.7%
M-1-		Hispanic	4	8	100%	3	3	100%
Male		Total	172	717	94.3%	182	632	93.8%
		Caucasian	809	2,552	89.3%	874	2,428	94.6%
		African American	81	454	83.7%	84	446	87.0%
	30-59	Asian or Pacific Islander	15	68	75.0%	30	138	94.2%
		Hispanic	10	20	100%	9	14	85.7%
		Total	915	3,094	88.2%	997	3,026	93.4%
		Caucasian	140	381	94.0%	140	452	89.6%
		African American	/	44	79.5%	3	15	100%
	60+	Asian or Pacific Islander	0	0	-	1	0	-
		Hispanic	1	4	100%	0	0	-
		Total	148	429	92.5%	144	467	89.9%
		TOTAL	1,279	4,368	89.7%	1,371	4,270	92.8%

Table 16. Vans/Minivans Statewide Demographic Summary (Continued)

	Damasan	aukia Data		Van	s/Minivans	Safety Be	elt Use	
	Demogra	aphic Data	Statewid	le Pre-Enf	orcement	Statewic	le Post-Enf	orcement
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	African American	0	0	-	1	2	0.0%
		Total	0	0	-	1	2	0.0%
		Caucasian	43	118	97.5%	43	97	93.8%
	4 15	African American	6	21	76.2%	2	10	100%
	4-15	Asian or Pacific Islander	1	6	100%	0	0	-
		Total	50	145	94.5%	45	107	94.4%
		Caucasian	147	553	91.3%	157	528	96.2%
	16-29	African American	18	143	97.9%	26	132	97.0%
		Asian or Pacific Islander	7	56	89.3%	6	44	100%
		Hispanic	1	2	100%	1	1	1
		Total	173	754	92.4%	190	705	96.6%
Female		Caucasian	848	2,571	93.7%	932	2,425	97.4%
		African American	66	462	95.5%	65	356	95.8%
	30-59	Asian or Pacific Islander	17	80	80.0%	16	69	100%
		Hispanic	8	14	100%	6	15	80.0%
		Native American	2	3	100%	1	1	100%
		Total	941	3,130	93.6%	1,020	2,866	97.2%
		Caucasian	140	446	99.1%	127	437	96.1%
		African American	7	58	100%	4	20	100%
	60+	Asian or Pacific Islander	0	0	-	1	2	100%
		Hispanic	1	0	-	0	0	-
		Native American	1	1	0.0%	0	0	-
		Total	149	505	99.0%	132	459	96.3%
		TOTAL	1,313	4,534	94.1%	1,388	4,139	96.9%

Table 17. Pick-up Trucks Statewide Demographic Summary

D	emograpl	nia Data		Pick-	up Trucks	Safety Belt U	se	
ע	emograpi	nc Data	Statewid	e Pre-Enforce	ement	Statewid	e Post-Enforce	ement
Gender	Age	Race	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU	Actual Total # of Observations	Weighted Total # of Observations	Weighted % of SBU
	0-3	Caucasian	1	3	100%	3	10	80.0%
	0-3	Total	1	3	100%	3	10	80.0%
		Caucasian	32	77	94.8%	30	62	93.5%
	4-15	African American	4	11	36.4%	1	7	100%
		Hispanic	1	1	0.0%	0	0	-
		Total	37	89	86.5%	31	69	94.2%
		Caucasian	536	1,638	78.4%	576	1,618	89.6%
	16-29	African American	25	126	77.0%	22	138	87.0%
		Asian or Pacific Islander	6	29	100%	7	24	58.3%
		Hispanic	3	7	87.5%	12	26	92.3%
Male		Total	570	1,800	78.7%	617	1,806	89.0%
Whate		Caucasian	1,977	5,535	84.1%	2,199	5,243	89.7%
		African American	83	381	97.6%	87	424	96.9%
	30-59	Asian or Pacific Islander	26	116	85.3%	10	17	100%
		Hispanic	20	65	75.4%	15	36	97.2%
		Native American	0	0	-	1	1	100%
		Total	2,106	6,097	84.9%	2,312	5,721	90.4%
		Caucasian	344	704	89.6%	239	555	94.6%
	60+	African American	5	39	100%	8	38	89.5%
		Total	349	743	90.2%	247	593	94.3%
		TOTAL	3,063	8,732	83.8%	3,210	8,199	90.4%

**Table 17. Pick-up Trucks Statewide Demographic Summary (Continued)** 

	Domogra	phic Data	Pick-up Trucks Safety Belt Use								
	Demogra	рше рата	Statewid	le Pre-Enf	orcement	Statewid	e Post-Enf	orcement			
Gender	Age	Race	Actual Total # of Obs.	Weighted Total # of Obs.			Weighted Total # of Obs.	Weighted % of SBU			
	0-3	Caucasian	1	2	100%	2	3	0.0%			
	0-3	Total	1	2	100%	2	3	0.0%			
		Caucasian	23	53	83.0%	17	25	88.0%			
	4-15	African American	0	0	-	2	13	100%			
		Total	23	53	83.0%	19	38	92.1%			
		Caucasian	159	517	85.3%	139	407	96.3%			
	16-29	African American	7	47	61.7%	8	42	100%			
		Asian or Pacific Islander	2	11	100%	2	6	100%			
Б 1		Hispanic	0	0	-	2	4	100%			
Female		Total	168	575	83.7%	151	459	96.7%			
		Caucasian	503	1,344	91.8%	500	1,115	93.8%			
		African American	15	62	83.9%	14	86	91.9%			
	30-59	Asian or Pacific Islander	5	30	100%	1	1	100%			
		Hispanic	3	6	60.0%	3	4	100%			
		Total	526	1,442	0.0%	518	1,207	0.0%			
		Caucasian	79	171	95.9%	45	104	96.1%			
	60+	Hispanic	1	1	100%	0	0	-			
		Total	80	172	95.9%	45	104	96.2%			
		TOTAL	798	2,244	89.7%	735	1,811	94.6%			

## **6.2** Rural Over-Sample Observational Surveys

The observational survey for the pre-media rural over-sample was performed between Monday, April 17<sup>th</sup> and Sunday, May 1<sup>st</sup> of 2006. During the observation of 75 rural intersections, the total number of vehicles observed was 5,675. In comparison with the data collection efforts of 2005, an average of 11 more vehicles per intersection were observed. In 2005, only 60 sites were observed with a sample size of 3,890.

The observational survey for the post-media/pre-enforcement rural over-sample was performed between Monday, May 8th and Monday, May 15th of 2006. During the observation of 75 rural

intersections, 3,932 vehicles were observed. In comparison with 2005, an average of 20 more vehicles per intersection were observed in the 2006 study. In 2005, 3,560 vehicles were observed at 60 intersections.

The observational survey for the post-enforcement rural over-sample was performed between Monday, June 4th and Sunday, June 18th of 2006. During the observation of 75 rural intersections, the total number of vehicles observed was 5,469. In comparison with the 2005 observational survey, an average of 10 more vehicles per intersection were observed. In 2005, 3,730 vehicles were observed at 60 intersections.

Table 18 indicates the weighted safety belt use by stratum. The weighted percent of safety belt use for each rural stratum has been calculated per the "Weighted Safety Belt Use Calculations" as detailed in the Data Analysis Section of this report. As shown in the table, each stratum recorded an increased percentage of safety belt use between the three observational waves, except for the Marquette Area Stratum. Additional breakdowns of the safety belt use rates and standard errors on a county level are provided in Appendix IV. Complete details of the observations on an intersection level are provided in Appendix V.

Table 18. Weighted Safety Belt Use Rate for Drivers and Front-Seat Passengers by Stratum for Rural Over-Sample Survey

Stratum	Pre-Media R Belt l	•	Post-Med Enforceme Safety Belt	ent Rural	Post-Enforcement Rural Safety Belt Use Rate		
	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error	
Flint	74.5% ± 5.19%	2.64%	90.8% ± 2.91%	1.48%	92.2% ± 2.88%	1.47%	
Marquette	90.1% ± 1.70%	0.86%	75.9% ± 3.13%	1.60%	85.9% ± 0.25%	0.13%	
Traverse	77.1% ± 3.02%	1.54%	89.1% ± 2.04%	1.04%	96.4% ± 1.63%	0.83%	
Rural Control	82.4% ± 3.48%	1.78%	90.4% ± 4.68%	2.39%	94.5% ± 0.12%	0.06%	

<sup>\*</sup> Weighted Safety Belt Usage  $\pm$  95% Confidence Band

Table 19 shows various descriptive statistics regarding the observational surveys in terms of day of the week and time of the day for each of the rural over-sample observational surveys.

Table 19. Rural Over-Sample Survey Descriptive Statistics

		Pre-M	Iedia Rural		Post-	-Media/Pr	e-Enforceme	nt Rural		Post-Enfo	orcement Rui	al
Day of the Week	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations
Sunday	4	5.3%	289	5.1%	2	2.7%	126	2.1%	5	6.7%	340	6.2%
Monday	9	12.0%	627	11.0%	10	13.3%	645	10.9%	10	13.3%	667	12.2%
Tuesday	17	22.7%	1,216	21.4%	14	18.7%	1,053	17.8%	14	18.7%	1,046	19.1%
Wednesday	18	24.0%	1,340	23.6%	11	14.7%	1,179	19.9%	10	13.3%	747	13.7%
Thursday	9	12.0%	797	14.0%	6	8.0%	449	7.6%	6	8.0%	439	8.0%
Friday	9	12.0%	738	13.0%	16	21.3%	1,238	20.9%	16	21.3%	1,220	22.3%
Saturday	9	12.0%	668	11.8%	16	21.3%	1,242	20.9%	14	18.7%	1,010	18.5%
Total	75	100%	5,675	100%	75	100%	5,932	100%	75	100%	5,469	100%
Time of the Day	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations	Total Observed Sites	Percent of Observed Sites	Actual Total No. of Observations	Percent of Observations
7 am – 8 am	0	0%	0	0%	5	6.7%	383	6.5%	0	0%	0	0%
8 am – 9 am	6	8.0%	539	9.5%	4	5.3%	268	4.5%	2	2.7%	100	1.8%
9 am – 10 am	12	16.0%	942	16.6%	8	10.7%	670	11.3%	6	8.0%	482	8.8%
10 am – 11 am	10	13.2%	729	12.8%	8	10.7%	569	9.6%	9	12.0%	656	12.0%
11 am – 12 pm	5	6.7%	270	4.8%	6	8.0%	480	8.1%	8	10.7%	591	10.8%
12 pm – 1 pm	9	12.0%	606	10.7%	12	16.0%	893	15.1%	11	14.7%	750	13.7%
1 pm – 2 pm	8	10.7%	560	9.9%	7	9.3%	652	11.0%	8	10.7%	580	10.6%
2 pm – 3 pm	3	4.0%	203	3.6%	9	12.0%	722	12.2%	7	9.3%	535	9.8%
3 pm – 4 pm	8	10.7%	578	10.6%	7	9.3%	583	9.8%	8	10.7%	519	9.5%
4 pm – 5 pm	4	5.3%	362	6.4%	4	5.3%	356	6.0%	10	13.3%	743	13.6%
5 pm – 6 pm	5	6.7%	472	8.3%	2	2.7%	143	2.4%	4	5.2%	377	6.9%
6 pm – 7 pm	5	6.7%	414	7.3%	3	4.0%	213	3.6%	2	2.7%	136	2.5%
Total	75	100%	5,675	100%	75	100%	5,932	100%	75	100%	5,469	100%

40

The safety belt use rate can be described for the rural over-sample by overall use rate, by stratum, by vehicle type and usage, as well as by various demographics. Table 14 summarizes the overall safety belt use rate for the rural over-sample by driver, front-seat passenger and total observations. As shown in Table 20, the driver safety belt use increased by 8.8 percent between the first and third observational waves. The front-seat passenger belt use also increased between the first and second waves by 13.9 percent. The total safety belt use also steadily increased by 10.2 percent between the first and third observational waves. For all users, the number of safety belt misuse can be considered negligible.

Table 20. Rural Over-Sample Survey - Safety Belt Use Summary

	Pre	-Media Ru	ral		Post-Media Iforcement		Post-Er	nforcement	Rural
Driver Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Not Belted	907	2,780	17.6%	1,040	1,282	14.4%	526	824	8.2%
Belted	4,754	12,989	82.2%	4,873	7,569	85.3%	4,929	9,199	91.6%
Belted Under Arm	9	18	0.1%	10	14	0.2%	9	13	0.1%
Belted Behind Back	5	11	0.1%	9	9	0.1%	5	10	0.1%
Total	5,675	15,798	100%	5,932	8,874	100%	5,469	10,046	100%
Passenger Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Not Belted	247	754	20.9%	237	304	11.0	135	230	7.3%
Child Seat	6	32	0.9%	1	1	0%	2	2	0.1%
Belted	1,152	2,814	77.9%	1,382	2,451	88.6%	1,511	2,886	91.8%
Belted Under Arm	0	0	0.0%	3	6	0.2%	6	8	0.3%
Belted Behind Back	3	11	0.3%	5	6	0.2%	10	17	0.5%
Total	1,408	3,611	100	1,628	2,768	100%	1,664	3,143	100%
Total Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Not Belted	1,154	3,534	18.2%	1,277	1,586	13.6%	661	1,054	8.0%
Child Seat	6	32	0.2%	1	1	0%	2	2	0%
Belted	5,906	15,803	81.4%	6,255	10,020	86.1%	6,440	12,085	91.6%
Belted Under Arm	9	18	0.1%	13	20	0.2%	15	21	0.2%
Belted Behind Back	8	22	0.1%	14	15	0.2%	15	27	0.2%
Total	7,083	19,409	100%	7,560	11,642	100%	7,133	13,189	100%

The rural over-sample portion of the project included four regions. Three of the four regions, the Traverse City area, Marquette area and the Flint area experienced a media campaign prior to and during the *Click It or Ticket* Campaign. The fourth region, the rural control area, did not receive the same media attention experienced in the three other regions. Comparisons of the safety belt use for the media markets and the rural control market indicates that there is little difference in the safety belt use percentages, in fact, the regions that received the media campaign recorded a lower safety belt use rate than the rural control area, which did not receive the same media emphasis. Tables 21 and 22 summarize the overall safety belt use rate for the rural media markets and the rural control area, respectively. Due to the similar results in the safety belt use rates between the two rural surveys (media market and rural control), the data presented in Tables 24 through 28 includes all four regions surveyed in the rural over-sample survey.

Table 21. Rural Media Market Survey - Safety Belt Use Summary

	Pre-	Media Rui	al		ost-Media/ forcement l	Rural	Post-Enforcement Rural		
Driver Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighte d % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Not Belted	699	1,938	18.1%	896	1,048	16.4%	456	711	9.2%
Belted	3,715	8,751	81.7%	3,789	5,339	83.4%	3,893	7,001	90.6%
Belted Under Arm	8	12	0.1%	6	6	0.1%	8	11	0.1%
Belted Behind Back	3	7	0.1%	6	5	0.1%	3	3	0.01%
Total	4,425	10,708	100%	4,697	6,398	100%	4,360	7,726	100%
Passenger Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighte d % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Not Belted	187	514	20.7%	206	258	11.8%	118	191	7.8%
Child Seat	6	32	1.3%	1	1	0.0%	2	2	0.0%
Belted	917	1,925	77.8%	1,129	1,920	87.7%	1,202	2,242	91.3%
Belted Under Arm	0	0	0.0%	3	6	0.3%	5	7	0.3%
Belted Behind Back	1	5	0.2%	4	4	0.2%	7	14	0.6%
Total	1,111	2,476	100%	1,343	2,189	100%	1,334	2,456	100%

Table 21. Rural Media Market Survey - Safety Belt Use Summary (Continued)

	Pre-	Pre-Media Rural			ost-Media/ forcement	Rural	Post-Enforcement Rural			
Total Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighte d % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Not Belted	886	2,452	18.6%	1,102	1,306	15.2%	574	902	8.9%	
Child Seat	6	32	0.2%	1	1	0.0%	2	2	0.1%	
Belted	4,632	10,676	81.0%	4,918	7,259	84.5%	5,095	9,243	90.8%	
Belted Under Arm	8	12	0.1%	9	12	0.2%	13	18	0.2%	
Belted Behind Back	4	12	0.1%	10	9	0.1%	10	17	0.2%	
Total	5,536	13,184	100%	6,040	8,587	100%	5,694	10,182	100%	

Table 22. Rural Control Survey - Safety Belt Use Summary

Table 22. Kurai Control Survey - Safety Deit Ose Summary										
	Pre	-Media Ru	ral		Post-Media Iforcement		Post-Enforcement Rural			
Driver Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Not Belted	208	842	16.5%	144	234	39.5%	70	113	4.9%	
Belted	1,039	4,238	83.3%	1,084	2,230	90.1%	1,036	2,198	94.7%	
Belted Under Arm	2	6	0.1%	4	4	0.1%	1	2	0.1%	
Belted Behind Back	1	4	0.1%	3	8	0.3%	2	7	0.3%	
Total	1,250	5,090	100%	1,235	2,476	100%	1,109	2,320	100%	
Passenger Belt Use	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Not Belted	60	240	21.2%	31	47	8.1%	17	38	5.5%	
Child Seat	0	0	0.0%	0	0	0.0%	0	0	0.0%	
Belted	235	888	78.3%	253	531	91.6%	309	645	93.8%	
Belted Under Arm	0	0	0.0%	0	0	0.0%	1	1	0.1%	
Belted Behind Back	2	6	0.5%	1	2	0.3%	3	4	0.6%	
Total	297	1,134	100%	285	580	100%	330	688	100%	
<b>Total Belt Use</b>	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Not Belted	268	1,082	17.3%	175	281	9.2%	87	151	5.0%	
Child Seat	0	0	0.0%	0	0	0.0%	0	0	0.0%	
Belted	1,274	5,126	82.4%	1,337	2,761	90.4%	1,345	2,843	94.5%	
Belted Under Arm	1	6	0.1%	4	4	0.1%	2	3	0.1%	
Belted Behind Back	4	10	0.2%	4	10	0.3%	4	11	0.4%	
Total	1,547	6,224	100%	1,520	3,056	100%	1,439	3,008	100%	

Table 23 summarizes the driver safety belt use rates by stratum and county. In Table 23, the county is listed based upon the stratum in which the county was included. The Flint stratum experienced a 17.7 percent increase between the first and third observational waves. All of the counties, except Gratiot and Isabella counties, experienced increases between these three waves of observational surveys. Bay County experienced the highest increase by 25.8 percent. The Traverse City area experienced an overall increase of 19.3 percent. All of the counties experienced increases between the three observational waves. The Marquette area experienced an overall decrease of 4.2 percent between the first and the third observational waves. Although each county in a stratum was not randomly selected, the selected counties in a stratum can be considered representative of the stratum. For the counties that were not selected, the safety belt use rates for those counties can be representative of the safety belt use rate of the entire stratum.

Table 23. Rural Over-Sample Safety Belt Use Rates by Stratum and County

				Sa	afety Belt U	se			
	Pı	re-Media Ru	ıral		ost-Media/P Forcement R		Post-Enforcement Rural		
Flint Area Stratum	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU
Bay County	289	1,233	70.2%	280	600	94.5%	321	448	96.0%
Gratiot County	68	138	88.4%	92	85	83.5%	76	100	95.0%
Isabella County	74	101	85.1%	201	210	84.8%	147	425	85.6%
Midland County	415	592	71.2%	483	490	85.5%	365	452	90.9%
Saginaw County	124	578	75.8%	115	298	94.0%	144	180	90.0%
Shiawassee County	278	516	81.2%	202	463	94.0%	265	694	94.8%
Total	1,248	3,158	74.5%	1,373	2,146	90.9%	1,318	2,299	92.2%

Table 23. Rural Over-Sample Safety Belt Use Rates by Stratum and County (Continued)

	Pr	e-Media Ru	ıral		Post-Media		Post-Enforcement Rural			
Traverse City Area Stratus	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Antrim County	156	565	80.1%	157	153	87.6%	160	285	97.9%	
Benzie County	59	132	78.0%	65	61	96.7%	69	108	94.4%	
Grand Traverse Area	109	593	87.2%	99	808	91.0%	108	408	98.3%	
Lake County	141	292	74.0%	190	866	92.1%	184	627	98.6%	
Leelanau County	278	2,312	76.9%	231	580	86.9%	243	554	98.9%	
Missaukee County	112	221	63.3%	98	84	88.1%	100	356	92.1%	
Osceola County	146	404	69.1%	92	102	94.1%	83	348	95.1%	
Oscoda County	81	402	76.6%	86	129	85.3%	80	172	94.2%	
Roscommon County	72	275	76.4%	92	138	78.3%	85	152	94.0%	
Wexford County	45	7	71.4%	94	282	87.2%	77	377	93.6%	
Total	1,199	5,203	77.1%	1,204	3,203	89.1%	1,189	3,387	96.4%	
Marquette Area Stratum	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Baraga County	300	514	92.6%	279	245	75.1%	329	306	85.9%	
Delta County	165	252	95.2%	192	166	83.1%	196	265	89.1%	
Dickinson County	393	660	91.4%	483	407	84.5%	335	462	84.6%	
Houghton County	552	1,199	86.4%	492	490	73.9%	563	798	85.3%	
Iron County	436	516	88.8%	525	491	72.3%	485	490	75.9%	
Keweenaw County	179	264	91.3%	309	324	71.3%	219	347	81.0%	
Marquette County	621	958	92.5%	787	759	73.1%	590	1,213	88.7%	
Schoolcraft County	443	461	88.3%	396	355	81.4%	470	615	91.4%	
Total	3,089	4,824	90.1%	3,463	3,237	75.9%	3,187	4,496	85.9%	
Rural Control Stratum	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	Actual Total # of Observa- tions	Weighted Total # of Observa- tions	Weighted % of SBU	
Allegan County	471	1,678	84.4%	328	1,293	96.4%	376	1,007	96.8%	
Ionia County	216	927	73.4%	341	598	87.1%	241	502	92.6%	
Lapeer County	164	970	80.4%	126	205	71.2%	201	372	94.9%	
Montcalm County	252	1,153	81.3%	344	434	80.0%	255	348	91.7%	
Van Buren County	444	1,496	87.8%	381	526	95.2%	366	778	93.7%	
Total	1,547	6,224	82.4%	1,520	3,056	90.3%	1,439	3,007	94.5%	

Tables 24 through 28 summarize the driver safety belt use by vehicle type for the survey day and time, gender, and age for the rural over-sample.

 Table 24. All Vehicles Rural Over-Sample Summary

				All Vehi	cles Safety	Belt Use			
Day of the Week	Pr	e-Media Ru	ıral		ost-Media/I forcement I		Post-E	nforcemer	nt Rural
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Sunday	404	1,282	72.9%	190	185	90.9%	481	1,519	96.0%
Monday	751	1,403	75.8%	811	1,158	86.4%	831	1,517	93.7%
Tuesday	1,498	3,128	81.1%	1,276	1,715	88.7%	1,354	2,033	90.9%
Wednesday	1,700	5,001	81.5%	1,442	1,717	33.1%	920	1,276	87.7%
Thursday	1,038	1,680	92.5%	538	519	71.3%	570	793	78.7%
Friday	847	4,318	80.0%	1,608	2,507	85.2%	1,622	2,792	91.8%
Saturday	845	2,597	85.4%	1,695	3,841	88.5%	1,355	3,259	93.7%
Total	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%
Time of the Day	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
7 am – 8 am	0	0	-	490	1,235	86.9%	0	0	-
8 am – 9 am	635	1,965	78.2%	323	445	90.6%	129	109	95.4%
9 am – 10 am	1,182	3,074	84.4%	809	1,266	88.7%	628	1,422	90.9%
10 am – 11 am	892	2,325	81.2%	741	721	82.5%	879	1,808	91.6%
11 am – 12 pm	325	882	70.3%	609	1,180	88.1%	762	1,195	89.6%
12 pm – 1 pm	796	2,042	79.0%	1,155	1,508	86.3%	1,001	1,834	92.5%
1 pm – 2 pm	730	2,187	83.7%	819	996	78.0%	721	1,983	90.5%
2 pm – 3 pm	238	681	79.3%	912	1,221	83.9	701	1,054	94.3%
3 pm – 4 pm	737	1,578	86.0%	735	1,357	85.9%	697	1,326	95.2%
4 pm – 5 pm	442	1,253	86.0%	458	433	84.3%	973	1,710	93.2%
5 pm – 6 pm	581	2,409	78.9%	200	179	82.1%	469	957	83.8%
6 pm – 7 pm	525	1,013	86.5%	309	1,101	91.6%	173	291	94.5%
Total	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%
Vehicle Type	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Passenger Cars	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%
Sport Utility	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%
Vans/Minivans	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%
Pick-up Trucks	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%
Total	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%
Gender	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
Male	4,152	11,365	78.0%	4,391	6,640	83.1%	4,051	7,353	89.5%
Female	2,931	8,044	86.7%	3,169	5,002	90.0%	3,082	5,836	94.3%
Total	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%

Table 24. All Vehicles Rural Over-Sample Summary (Continued)

	P	re-Media Ru	ral	Pre-F	Post-Media Enforcement		Post-Enforcement Rural			
Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
0-3	3	8	100%	1	1	100%	3	3	100%	
4-15	61	167	78.3%	127	213	86.9%	152	289	92.6%	
16-29	1,819	5,675	78.4%	1,809	2,432	83.1%	1,793	3,062	89.9%	
30-59	4,302	11,525	82.4%	4,417	7,301	86.5%	4,328	8,360	92.5%	
60+	898	2,034	85.8%	1,206	1,695	88.2%	857	1,475	91.6%	
Unknown	7	35	100%	0	0	-	0	0	-	
Total	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%	

**Table 25. Passenger Cars Rural Over-Sample Summary** 

	Passenger Cars Safety Belt Use									
Day of the Week	Pr	e-Media Ru	ıral		st-Media/I orcement I		Post-E	Enforcemen	t Rural	
Day of the Week	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
Sunday	152	450	80.4%	80	78	95.0%	196	568	96.5%	
Monday	328	588	72.7%	323	452	89.2%	381	707	94.9%	
Tuesday	635	1,274	87.5%	533	711	89.9%	592	872	93.5%	
Wednesday	719	2,188	87.0%	652	776	87.6%	385	547	91.4%	
Thursday	434	714	93.6%	225	222	79.3%	211	290	79.3%	
Friday	348	1,818	83.4%	679	1,151	88.3%	670	1,155	94.1%	
Saturday	337	1,127	87.7%	735	1,610	89.9%	649	1,583	93.6%	
Total	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%	
Time of the Day	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
7 am – 8 am	0	0	-	220	611	88.84%	0	0	-	
8 am – 9 am	274	826	85.6%	148	195	94.9%	53	46	95.7%	
9 am – 10 am	478	1,295	87.8%	348	615	90.4%	267	625	94.0%	
10 am – 11 am	380	967	86.5%	303	294	86.1%	359	719	94.0%	
11 am – 12 pm	111	273	84.6%	249	512	89.3%	377	587	92.9%	
12 pm – 1 pm	345	896	83.2%	500	638	89.0%	435	803	94.8%	
1 pm – 2 pm	286	900	86.0%	367	431	81.0%	325	681	91.6%	
2 pm – 3 pm	108	300	81.0%	361	471	88.7%	324	494	94.7%	
3 pm – 4 pm	297	635	89.0%	322	593	88.5%	274	496	95.4%	
4 pm – 5 pm	220	610	84.1%	213	209	84.2%	371	684	95.9%	
5 pm – 6 pm	230	1,037	81.3%	82	73	87.7%	209	425	80.0	
6 pm – 7 pm	224	420	91.4%	114	358	96.4%	90	162	96.9%	
Total	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%	

Table 25. Passenger Cars Rural Over-Sample Summary (Continued)

	P	re-Media Ru	ıral	Pre-F	Post-Media Enforcement		Post-Enforcement Rural			
Gender	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
Male	1,457	3,994	82.5%	1,577	2,475	87.5%	1,527	2,789	92.1%	
Female	1,496	4,165	88.4%	1,650	2,525	90.0%	1,557	2,933	94.2%	
Total	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%	
Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
0-3	1	1	100%	1	1	100%	2	2	93.2%	
4-15	26	67	80.6%	53	88	88.6%	49	92	100%	
16-29	939	2,928	84.3%	972	1,408	83.1%	1,011	1,796	89.9%	
30-59	1,523	4,040	82.4%	1,569	2,643	86.5%	1,517	2,939	92.5%	
60+	464	1,123	85.8%	632	860	88.2%	505	893	91.6%	
Total	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%	

**Table 26. Sport Utility Vehicles Rural Over-Sample Summary** 

			Spo	ort Utility	Vehicle Sa	fety Belt U	se			
Day of the Week	Pre-Media Rural			_	st-Media/I orcement I		Post-Enforcement Rural			
·	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
Sunday	70	223	74.0%	54	53	92.5%	93	330	98.8%	
Monday	125	234	74.4%	104	141	86.5%	118	233	97.4%	
Tuesday	207	403	80.3%	196	266	95.1%	192	305	89.8%	
Wednesday	259	767	86.2%	180	221	78.7%	122	172	87.8%	
Thursday	177	263	93.9%	76	78	71.8%	117	178	82.6%	
Friday	189	1,076	78.4%	339	552	86.2%	316	546	92.9%	
Saturday	136	409	92.7%	311	756	89.7%	258	680	96.0%	
Total	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%	

Table 26. Sport Utility Vehicles Rural Over-Sample Summary (Continued)

	P	re-Media Ru	ral	Pre-I	Post-Media Enforcement		Post-Enforcement Rural			
Time of the Day	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
7 am – 8 am	0	0	-	86	277	89.9%	0	0	-	
8 am – 9 am	105	319	82.3%	47	72	97.2%	29	23	95.7%	
9 am – 10 am	225	557	92.6%	130	201	92.0%	139	334	89.3%	
10 am – 11 am	149	385	76.6%	119	118	90.7%	155	352	94.3%	
11 am – 12 pm	44	108	69.4%	118	206	90.3%	113	172	85.5%	
12 pm – 1 pm	96	235	82.1%	165	207	84.1%	171	347	94.2%	
1 pm – 2 pm	114	355	84.2%	131	159	73.0%	120	270	93.3%	
2 pm – 3 pm	31	105	64.8%	149	211	84.4%	104	154	98.7%	
3 pm – 4 pm	119	275	92.7%	114	210	84.8%	110	238	99.2%	
4 pm – 5 pm	54	147	83.7%	97	83	88.0%	180	344	94.5%	
5 pm – 6 pm	116	642	78.3%	28	26	88.5%	77	176	91.5%	
6 pm – 7 pm	110	247	84.2%	76	297	91.6%	18	34	91.2%	
Total	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%	
Gender	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
Male	544	1,626	81.6%	620	1,018	84.1%	580	1,175	93.7%	
Female	619	1,749	84.0%	640	1,049	90.8%	636	1,269	93.2%	
Total	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%	
Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
0-3	1	5	100%	0	0	-	0	0	-	
4-15	13	38	71.1%	22	42	85.7%	30	70	90.0%	
16-29	302	1,017	80.6%	277	369	92.3%	274	465	90.3%	
30-59	724	2,069	84.2%	832	1,480	88.7%	833	1,780	94.2%	
60+	123	246	82.1%	129	176	92.2%	79	129	96.9%	
Total	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%	

Table 27. Vans/Minivans Rural Over-Sample Summary

		Vans/Minivans Safety Belt Use									
Day of the Week	Pr	e-Media R	ıral		ost-Media/I forcement l		Post-E	Inforcemen	t Rural		
Day of the Week	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
Sunday	59	205	71.9%	20	19	94.7%	82	264	97.0%		
Monday	110	189	84.7%	114	163	87.1%	99	159	95.6%		
Tuesday	198	465	72.5%	157	258	94.6%	205	317	89.9%		
Wednesday	212	609	87.4%	175	213	88.0%	130	190	91.1%		
Thursday	131	211	97.2%	66	58	84.5%	84	115	81.7%		
Friday	103	501	89.4%	195	254	89.0%	250	430	89.8%		
Saturday	130	351	91.7%	214	531	90.8%	155	377	91.8%		
Total	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%		
Time of the Day	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
7 am – 8 am	0	0	-	68	115	92.2%	0	0	-		
8 am – 9 am	98	293	75.9%	41	66	94.0%	13	10	100%		
9 am – 10 am	147	388	89.2%	92	147	96.6%	91	190	88.4%		
10 am – 11 am	109	282	84.0%	106	102	85.1%	114	229	93.0%		
11 am – 12 pm	42	132	50.8%	93	188	85.6%	88	144	90.2%		
12 pm – 1 pm	118	320	73.8%	164	228	88.6%	145	264	94.7%		
1 pm – 2 pm	99	291	92.4%	68	88	79.5%	89	177	85.3%		
2 pm – 3 pm	35	97	99.0%	106	148	89.9%	93	131	96.2%		
3 pm – 4 pm	105	208	89.4%	100	209	95.2%	120	241	97.1%		
4 pm – 5 pm	52	152	97.4%	42	39	94.9%	163	289	89.6%		
5 pm – 6 pm	74	244	92.6%	21	18	88.9%	67	145	84.1%		
6 pm – 7 pm	64	122	94.3%	40	148	91.9%	22	32	96.9%		
Total	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%		
Gender	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
Male	488	1,308	79.5%	460	718	88.3%	495	884	87.4%		
Female	455	1,221	90.8%	481	778	92.3%	510	968	95.0%		
Total	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%		
Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
0-3	0	0	-	0	0	-	0	0	-		
4-15	10	23	87.0%	25	38	78.9%	31	59	91.5%		
16-29	140	388	82.9%	101	129	86.0%	139	234	87.2%		
30-59	682	1,861	85.0%	653	1,090	91.0%	715	1,344	92.3%		
60+	111	257	88.0%	162	239	90.4%	120	215	89.4%		
Total	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%		

Table 28. Pick-up Trucks Rural Over-Sample Summary

	Pick-up Trucks Safety Belt Use										
Day of the Week	Pr	e-Media Ru	ıral		ost-Media/I orcement l	_	Post-E	Enforcemen	ıt Rural		
	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
Sunday	123	406	64.5%	36	35	77.1%	110	357	91.3%		
Monday	188	392	77.3%	270	402	82.6%	233	418	88.5%		
Tuesday	458	986	77.1%	390	480	80.2%	365	539	88.1%		
Wednesday	510	1,437	68.3%	435	507	75.0%	283	367	80.4%		
Thursday	296	492	88.2%	171	161	55.3%	158	210	72.4%		
Friday	207	923	69.6%	395	550	76.2%	386	661	88.4%		
Saturday	242	710	74.4%	435	944	83.7%	293	619	92.7%		
Total	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%		
Time of the Day	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
7 am – 8 am	-	-	-	116	232	76.3%	-	-	-		
8 am – 9 am	158	527	65.5%	87	112	77.7%	34	30	93.3%		
9 am – 10 am	332	834	71.3%	239	303	79.2%	131	273	86.4%		
10 am – 11 am	254	691	75.3%	213	207	72.0%	251	508	85.4%		
11 am – 12 pm	128	369	66.5%	149	274	86.1%	184	292	84.9%		
12 pm – 1 pm	237	591	74.5%	326	435	82.1%	250	420	85.0%		
1 pm – 2 pm	231	641	76.3%	253	318	76.1%	187	355	89.3%		
2 pm – 3 pm	64	179	73.9%	296	391	75.4%	180	275	90.2%		
3 pm – 4 pm	216	460	76.5%	199	345	76.2%	193	351	91.5%		
4 pm – 5 pm	116	344	84.9%	106	102	76.5%	259	393	90.1%		
5 pm – 6 pm	161	486	67.5%	69	62	71.0%	116	211	84.8%		
6 pm – 7 pm	127	224	75.4%	79	298	85.6%	43	63	90.5%		
Total	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%		
Gender	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU		
Male	1,663	4,437	72.1%	1,734	2,429	76.8%	1,449	2,505	85.5%		
Female	361	909	77.9%	398	650	85.7%	379	666	95.3%		
Total	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%		

 Table 28. Pick-up Trucks Rural Over-Sample Summary (Continued)

	P	re-Media Ru	ral	Pre-F	Post-Media Enforcement		Post-I	Enforcemen	t Rural
Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
0-3	1	2	100%	0	0	-	1	1	100%
4-15	12	39	76.9%	27	44	90.9%	42	68	89.7%
16-29	438	1,342	62.5%	459	528	73.5%	369	567	82.9%
30-59	1,373	3,555	75.6%	1,363	2,087	78.3%	1,263	2,297	88.8%
60+	200	408	84.8%	283	420	85.2%	153	238	87.4%
Total	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%

Overall, the occupants of the sport utility vehicles and vans/minivans had the two highest safety belt use rates, similar to the findings of 2005. Pick-up truck drivers had the lowest overall safety belt use rate of 87.6 percent during the third wave of observations; an increase of 0.1 percent from the findings of 2005.

In general, safety belt use rates were higher on Sunday when compared to the other days of the week. The safety belt use rates did not consistently vary for the time of the day comparisons. Females tend to utilize their safety belts more often than their male counterparts. Drivers between 16 and 29 years of age were the lowest safety belt users regardless of vehicle type. Tables 29 through 33 summarize occupant safety belt use rates demographically subdivided by gender and age. Due to the low sample of drivers outside of the Caucasian race, nothing can be stated regarding safety belt use rates of other races.

**Table 29.** All Vehicles Rural Over-Sample Demographic Summary

Demogr	raphic				All V	Vehicle Safety	Belt Use			
	Data Pre-Media Rural		al	Post-Medi	a / Pre-Enforc	ement Rural	Post-Enforcement Rural			
Gender	Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	0	0	-	0	0	-	1	1	100%
	4-15	29	88	81.8%	73	147	91.2%	95	179	82.1%
	16-29	891	2,805	72.4%	1,035	1,383	78.5%	997	1,693	88.0%
Male	30-59	2,727	7,374	79.0%	2,593	4,170	83.4%	2,482	4,706	90.3%
	60+	505	1,098	84.5%	690	940	87.7%	476	774	90.3%
	Total	4,152	11,365	77.9%	4,391	6,640	83.2%	4,051	7,353	89.5%
	0-3	3	8	100%	1	1	100%	2	2	150.0%
	4-15	32	79	72.2%	54	65	76.9%	57	110	92.7%
Famala	16-29	928	2,870	83.3%	774	1,051	89.2%	796	1,369	92.3%
Female	30-59	1,575	4,151	88.4%	1,824	3,130	90.7%	1,846	3,654	95.3%
	60+	393	936	87.5%	516	755	89.1%	381	701	93.3%
	Total	2,931	8,044	86.3%	3,169	5,002	89.9%	3,082	5,836	94.3%
Т	OTAL	7,083	19,409	81.6%	7,560	11,642	86.1%	7,133	13,189	91.7%

Table 30. Passenger Vehicles Rural Over-Sample Demographic Summary

Demog	raphic				Passe	nger Cars Safe	ety Belt Use									
Data		]	Pre-Media Rui	ral	Post-Medi	a / Pre-Enforc	ement Rural	Post-H	Enforcement Ru	ural						
Gender	Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU						
	0-3	0	0	-	0	0	0-	0	0	-						
	4-15	11	41	80.5%	27	59	89.8%	28	53	67.9%						
	16-29	403	1,221	79.0%	474	702	82.1%	514	905	91.7%						
Male	30-59	827	2,236	84.3%	760	1,279	89.8%	730	1,408	93.0%						
	60+	216	496	83.5%	316	435	89.4%	255	423	92.7%						
	Total	1,457	3,994	82.5%	1,577	2,475	87.6%	1,527	2,789	92.0%						
	0-3	1	1	100%	1	1	100%	2	2	150.0%						
	4-15	15	26	76.9%	26	29	86.2%	21	39	89.7%						
Famala	16-29	536	1,707	87.2%	498	706	90.8%	497	891	93.0%						
Female	30-59	696	1,804	88.8%	809	1,364	90.0%	787	1,531	95.8%						
	60+	248	627	88.7%	316	425	88.7%	250	470	92.3%						
	Total	1,496	4,165	88.0%	1,650	2,525	89.9%	1,557	2,933	94.3%						
	TOTAL	2,953	8,159	85.5%	3,227	5,000	88.7%	3,084	5,722	93.2%						

 Table 31. Sport Utility Vehicle Rural Over-Sample Demographic Summary

Demog	raphic				Sport Ut	ility Vehicle S	afety Belt Use			
Da	ta	F	re-Media Rur	al	Post-Medi	a / Pre-Enforc	ement Rural	Post-Enforcement Rural		
Gender	Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	0	0	-	0	0	-	0	0	-
	4-15	4	9	66.7%	13	29	96.6%	23	55	87.3%
	16-29	115	416	78.1%	138	187	77.0%	118	209	94.3%
Male	30-59	353	1,061	81.8%	401	708	84.6%	397	842	93.8%
	60+	72	140	88.6%	68	94	91.5%	42	69	94.2%
	Total	544	1,626	81.4%	620	1,018	84.1%	580	1,175	93.6%
	0-3	1	5	100%	0	0	-	0	0	-
	4-15	9	29	72.4%	9	13	61.5%	7	15	100%
Famala	16-29	187	601	81.5%	139	182	89.0%	156	256	87.1%
Female	30-59	371	1,008	86.7%	431	772	92.5%	436	938	94.3%
	60+	51	106	74.5%	61	82	84.1%	37	60	100%
	Total	619	1,749	84.0%	640	1,049	90.8%	636	1,269	93.3%
,	TOTAL	1,163	3,375	82.8%	1,260	2,067	87.5%	1,216	2,444	93.4%

Table 32. Vans/Minivans Rural Over-Sample Demographic Summary

Demog	raphic				Vans/	Minivans Safe	ty Belt Use				
Da	-	Pre-Media Rural		al	Post-Medi	Post-Media / Pre-Enforcement Rural			Post-Enforcement Rural		
Gender	Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	
	0-3	0	0	-	0	0	-	0	0	-	
	4-15	5	10	100%	13	23	78.3%	16	26	92.3%	
Male	16-29	52	176	73.9%	49	71	87.3%	72	130	82.3%	
	30-59	366	972	79.8%	319	525	87.6%	348	629	89.2%	
	60+	65	150	83.3%	79	99	94.9%	59	99	82.8%	
	Total	488	1,308	79.5%	460	718	88.3%	495	884	87.4%	
	0-3	0	0	-	0	0	-	0	0	-	
	4-15	5	13	76.9%	12	15	80.0%	15	33	90.9%	
Famala	16-29	88	212	89.6%	52	58	84.5%	67	104	93.3%	
Female	30-59	316	889	90.6%	334	565	94.2%	367	715	95.1%	
	60+	46	107	96.3%	83	140	89.3%	61	116	96.6%	
	Total	455	1,221	90.7%	481	778	92.3%	510	968	95.0%	
,	TOTAL	943	2,529	85.0%	941	1,496	90.3%	1,005	1,852	91.4%	

Table 33. Pick-up Trucks Rural Over-Sample Demographic Summary

Demog	raphic				Pick-u	p Trucks Safe	ty Belt Use			
Da	ita	Pre-Media Rur		al	Post-Media / Pre-Enforcement Rural			Post-Enforcement Rural		
Gender	Age	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU	Actual Total # of Obs.	Weighted Total # of Obs.	Weighted % of SBU
	0-3	0	0	-	0	0	-	1	1	100%
	4-15	9	28	82.1%	20	36	97.2%	28	45	86.7%
Male	16-29	321	992	61.5%	374	423	71.9%	293	449	79.3%
	30-59	1,181	3,105	74.1%	1,113	1,658	76.6%	1,007	1,827	86.9%
	60+	152	312	84.9%	227	312	81.7%	120	183	87.4%
	Total	1,663	4,437	72.1%	1,734	2,429	76.8%	1,449	2,505	85.5%
	0-3	1	2	100%	0	0	-	0	0	-
	4-15	3	11	54.5%	7	8	62.5%	14	23	95.7%
Famala	16-29	117	350	63.7%	85	105	81.0%	76	118	96.6%
Female	30-59	192	450	86.0%	250	429	85.1%	256	470	96.2%
	60+	48	96	84.4%	56	108	94.4%	33	55	87.3%
	Total	361	909	77.0%	398	650	85.5%	379	666	95.3%
	TOTAL	2,024	5,346	73.2%	2,132	3,079	78.7%	1,828	3,171	87.6%

### **6.3 Program Comparisons**

Table 34 summarizes the findings of the 2005 and 2006 safety belt observational surveys for the *Click It or Ticket* Mobilization. As seen in the table, the actual number of observations were greater in 2006 than in 2005, except for the statewide pre-enforcement wave. The number of weighted observations was greater for all observational waves in 2006 as compared to 2005. The 2006 statewide pre-enforcement observational surveys had a minor improvement over the same wave of 2005. Although the post-enforcement safety belt use rates of 2006 were improved over the 2005 rates, the rural observational surveys in 2006 yielded much lower rates for the premedia and pre-enforcement survey waves.

Table 34. 2005 and 2006 Comparison

Observational Survey	2005 No. of Sites	2006 No. of Sites	2005 Actual No. of Observations	2006 Actual No. of Observations	2005 Weighted No. of Observations	2006 Weighted No. of Observations	2005 Safety Belt Use Percent	2006 Safety Belt Use Percent
Statewide Pre-Enforcement	192	192	19,382	18,262	36,021	64,401	89.4	89.9
Statewide Post-Enforcement	192	192	16,981	20,472	36,842	63,821	92.9	94.0
Rural Pre-Media	60	75	4,960	7,083	7,383	19,409	88.9	81.4
Rural Post-Media/ Pre-Enforcement	60	75	4,360	7,560	4,999	11,642	89.0	86.1
Rural Post- Enforcement	60	75	4,780	7,133	4,780	13,189	91.2	91.6

Based upon the safety belt use rate trends shown in Figure 2, continued efforts in the media and with enforcement may reduce the variation between the annual *Click It or Ticket* Enforcement campaigns. Continued monitoring of the media and enforcement efforts will ensure adequate behavioral modifications are maintained throughout the year.

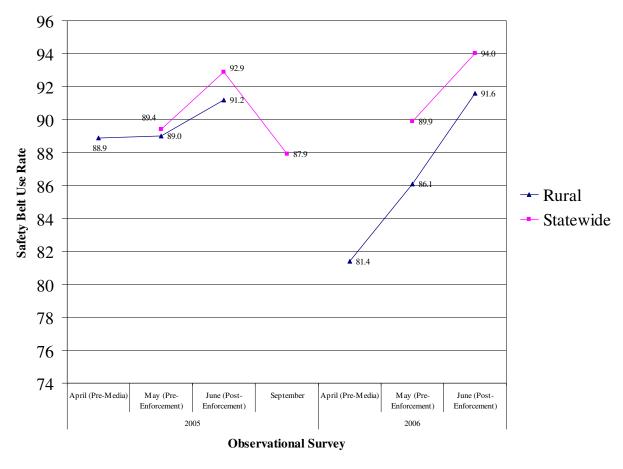


Figure 2. 2005 Through 2006 Safety Belt Use Rate Trends

### **6.4 Program Enhancements**

As shown in the findings from the various observational surveys, males and pick-up drivers should be targeted in future *Click It or Ticket* campaigns. Continuing programs in urban areas should impact African American occupants while targeting a substantial portion of the state's population.

With the current success rate of the *Click It or Ticket* campaign, the future potential of improving the safety belt use rate may yield a lower rate of increase. Future programs may focus on targeted areas where the safety belt use rates are still relatively low. For instance, Stratum 1 has a consistently high safety belt use rate, whereas areas of Stratum 3 or Stratum 4 have lower rates.

#### REFERENCES

- 1. NHTSA's National Center for Statistics and Analysis, "Traffic Safety Facts Research Note," Safety Belt Use in 2005- Use Rates in the States and Territories, November 2005.
- 2. "Click It or Ticket Enforcement Planner Fact Sheet and Talking Points," Buckle Up America, U.S. Department of Transportation, NHTSA, 2006.
- 3. NHTSA's National Center for Statistics and Analysis, "Traffic Safety Facts 2004 Data," Occupant Protection, U.S. Department of Transportation, NHTSA.
- 4. "The National Initiative for Increasing Safety Belt Use Buckle Up America Campaign," Eight Report to Congress, Sixth Report to the President, U.S. Department of Transportation, NHTSA, September 2005.
- 5. "Expanded Enforcement, New Advertisements Kick-Off Statewide Click It or Ticket Enforcement Effort," May 15, 2006, Michigan State Police.

# APPENDIX I – COMPLETE LISTING OF THE OBSERVATIONAL SITES IN MICHIGAN

County Ingham County	Intersection No. and Name
Ingham County	
	1. M-106 and M-52
-	2. Lake Lansing and Hagadorn
	3. Barnes and Eden
	4. Michigan and Waverly
	5. Putnam and M-43
	6. M-43 and Williamston
	7. Barry and Zimmer
	8. Tihart and Cornell
	9. Holt and M-52
	10. Cavannah and Pennsylvania
	11. Rossman and Onodaga
	12. I-496 and Dunkel
	13. Cedar and US-127
	14. US-127 and Saginaw 1. M-43 and 6 <sup>th</sup>
Kalamazoo County	1. M-43 and 6 <sup>th</sup>
	2. M-89 and 43 <sup>rd</sup>
	3. H Ave. and 30 <sup>th</sup>
	4. K Drive and 4 Mile
	5. AB and M-89
	6. M-89 and 42 <sup>nd</sup>
	7. G and Riverview
	8. S Ave. and 8 <sup>th</sup>
	9. S Ave. and 34 <sup>th</sup> 10. W Ave. and 2 <sup>nd</sup>
0.11 1.0 4	10. W Ave. and 2  1. Taft and 9 Mile
Oakland County	2. Northwestern and Middlebelt
	3. Clarkston and Baldwin
	4. Snell and Rochester
	5. 14 Mile and Main
	6. Holly and Grange Hall
	7. Grand River and Taft
	8. I-696 and Orchard Lake
	9. M-10 and 8 Mile
	10. I-696 and Woodward
	11. Walton and Lapeer
	12. Dixie and Davisburg
	13. I-75 and Sashabaw
Washtenaw County	1. Ann Arbor and East Main
washichaw County	2. Saline-Milan and Mooreville
	3. Mooreville and Stony Creek
	4. Dixboro and North Territorial
	5. Austin and Schneider
	6. Geddes and Earhart
	7. Zeeb and North Territorial
	8. I-94 and Jackson
	9. I-94 and Huron/Whitaker
	10. I-94 and State
	11. M-14 and Maple

~ .	
County	Intersection No. and Name
Allegan County	1. 102 <sup>nd</sup> and 42 <sup>nd</sup>
	2. 30 <sup>th</sup> and 134 <sup>th</sup>
	3. US-131 and 135 <sup>th</sup>
	4. M-89 and US-131
Bay County	1. M-61 and Standish
	2. Garfield/Rodgers and Anderson
	3. Finn and Munger
	4. I-75 and Pinconning
Eaton County	1. M-43 and Canal
	2. Ionia and M-50
	3. Nixon and Willow
	4. Royston and Island Highway
	5. Ainger and Battle Creek
	6. I-96 and Nash
	7. Battle Creek and Kalamo
	8. Main and Washington
Grand Traverse County	1. M-72 and M-31
Jackson County	1. Rosehill and Elm
	2. Wolf Lake and Cady
	3. Michigan and Lake
	4. Michigan and US-127
	5. US-127 and Page
Kent County	1. 4 Mile and Walker
	2. Sparta and Ball Creek
_	3. US-131 and 10 Mile
_	4. US-131 and 84 <sup>th</sup>
_	5. US-131 and 68 <sup>th</sup>
<u> </u>	6. 10 Mile and Wabasis
<u> </u>	7. Lakeview and 14 Mile
Title Control	8. 17 Mile and Myers Lake
Livingston County	<ol> <li>Grand River and Pleasant Valley</li> <li>M-36 and Dexter</li> </ol>
_	3. M-36 and M-106
_	4. I-96 and Kensington
	5. US-23 and Clyde
	6. Old US-23 and M-59
Macomb County	1. Jefferson and Martin
Macomb County	2. 22 Mile and Heydenreich
	3. Moravian and Harrington
	4. 27 Mile and Romeo Plank
	5. 34 Mile and M-53
<del> -</del>	6. 23 and M-53
	7. I-696 and Groesbeck
Midland County	1. Redstone and 11 Mile
	2. Pine River and Badour
	3. Meridian and Lake Sanford
	4. Main and Washington
	5. M-20 and Homer
Ottawa County	Lake Michigan and 136 <sup>th</sup> Polk and 104 <sup>th</sup>
, T	2. Polk and 104 <sup>th</sup>

STRATUM 3	
County	Intersection No. and Name
Berrien County	1. Pipestone and Naomi
	2. I-94 and Lakeside/Union
	3. I-94 and US-31
Calhoun County	1. 15 Mile and Michigan
	2. Evanston and Michigan
	3. B Drive and Beadle Lake
	4. I-94 and 5 Mile
Clinton County	1. M-21 and Lowell
	2. M-21 and Shepardsville
	3. Hyde and Welling
	4. Price/Main and Grange
	5. Clark and Upton
Genesee County	1. M-57 and Vassar
	2. Flushing and Ballanger
	3. Grand Blanc and Duffield
	4. Beecher and Elms
	5. Mt. Morris and I-75
	6. I-475 and Court
Ionia County	1. Zahm/Bridge and State
	2. Cross/Clarksville and Main
Isabella County	Blanchard and Winn
Lapeer County	1. M-24 and Coulter
	2. Otter Lake and Klam
Lenawee County	1. US-12 and Brooklyn
	2. Clinton Macon and Mills
	3. M-50 and Sand Lake

County	Intersection No. and Name
Marquette County	1. Hwy. 95 and Cr-LLK
	2. Washington and Main
Monroe County	Ostrander and Plank
	2. Ostrander and Bunce
	3. Telegraph and Dunbar
	4. US-23 and US-223
	5. US-23 and Dixon
	6. US-23 and Plank Road
Montcalm County	Condensary and Crystal
	2. Sidney and Vickeryville
	3. M-91 and Sidney
Muskegon County	Blackmer and Heights Ravenna
	2. Ravenna Heights and Ensley
	3. Sullivan and Ravenna Heights
aginaw County	1. Birch Run and Bishop
hiawasee County	1. Lansing and M-52
	2. Juddville and Chipman
	3. I-69 and M-52
t. Clair County	1. Lambs Rd. and M-19
	2. Perch and M-29
	3. I-69 and Riley Center Rd.
t. Joseph County	1. Gleason and US-131
	2. Banker and Klinger
an Buren County	1. 687 and 384
	2. CR-380 and CR-681
	3. M-51 and CR-352
	4. I-196 and Phoenix

STRATUM 4	
County	Intersection No. and Name
Wayne County	1. 6 Mile and Evergreen
	2. Telegraph and Northline
	3. Haggerty and Ecorse
	4. Wick and Wayne
	5. Eureka and Telegraph
	6. Woodward and Warren
	7. Palmer and Lilley
	8. Geddes and Canton Center
	9. Ecorse and Monroe
	10. Michigan and Greenfield
	11. Eureka and Middlebelt
	12. 7 Mile and M-53 (Van Dyke)
	13. Farmington and Plymouth
	14. Van Dyke and Davison
	15. Vernier and Mack
	16. Van Horn and Inkster
	17. Outer Drive and Rotunda/Village
	18. Annapolis and Wayne
	19. 8 Mile and Randolph
	20. Plymouth and Greenfield
	21. Goddard and Fort
	22. Grand River and 8 Mile
	23. 9 Mile and Greenfield
	24. Ford and Sheldon
	25. Vernier and Lake Shore Drive
	26. I-96 and Middlebelt
	27. I-96 and Livernois
	28. Warren and Southfield
	29. Randolph and Jefferson
	30. Greenfield and M-10
	31. Northline and I-75
	32. Schafer and Grand River
	33. I-94 and Harper/Vernier
	34. I-75 and Southfield
	35. Huron River and Sibley
	36. Rawsonville and Textile
	37. Main and Sumpter
	38. Sumpter and Oakville Waltz
	39. Waltz and Willow
	40. Savage and Haggerty/Bemis
	41. Rawsonville and Willis

RURAL STRATUN	М	
Area	County	Intersection No. and Name
Marquette Media	Schoolcraft	1. US-2 and Hwy. 77
Market		2. Maple St. and Arbutus Ave.
		3. I-94 and Caribou
		4. US-2 and CR-442
	Delta	5. US-2 and KK Road
		6. Hwy. 35 and Brampton 27.5
	Dickenson	7. US-2 and Hamilton Lake/State St.
		8. US-2 and Upper Pine Creek
		9. Hwy. 69 and Conrad Rd.
		10. Hwy. 69 and Groveland Mine
	Iron	11 Hwy. 69 and Camp 5 Road
		12. Logan St. and Hwy. 69
		13. 7 <sup>th</sup> Ave. and US-2 St.
		14. US-16 and US-2
		15. US-16 and Hwy. 28
	Houghton	16. Federal Forest 16/US 16 and Hwy. 38
		17. Hwy. 26 and Iroquios
		18. Hwy. 26 and Scout Camp
		19. US-41 and School
		20. US-41 and 1 <sup>st</sup>
	Keewanaw	21. US-41 and 5 <sup>th</sup> /Chassell Painesdale
		22. US-41 and Portage Entry
	Baraga	23. Hwy. 28 and W. Korpi/Saarinen
		24. US-41 and Old M-28
		25. US-41 and King Lake
	Marquette	26. US-41 and Wawanonowin
		27. US-41 and Lake Shore
		28. Hwy. 95 and CR-LLK
		29. Hwy. 95 and Beach
		30. Washington and Hwy. 28-BR
Traverse Media	Roscommon	Maple Valley and West Branch
Market	Oscoda	2. CR F-32 (Miller) and CR 489 (Red Oak)
Warket	Antrim	3. Old State and Derenzy
		4. Comfort Road and Alden Hwy.
	Grand Traverse	5. M-113 and Hency
	Leelanau	6. M-22 and Carter
	Lecianaa	7. 633 and 614
		8. Maple City Rd. and 667 and M-72
	Benzie	9. Cinder and Thompsonville
	Wexford	10. CR-38 and CR-25
	Missaukee	11. Finkle and 13 Mile
	Lake	12. 8 Mile and Bass Lake
	Lake	
	Oscarola	13. M-37 and Old M-63 (4 ½ Mile) 14. M-115 and 100 <sup>th</sup>
	Osceola	14. WI-113 and 100

RURAL STRATU	JM (Continued)				
Area	County	Intersection No. and Name			
Flint Media	Bay	1. M-61 and Standish			
Market		2. I-75 and Pinconning			
		3. Garfield/Rodgers and Anderson			
		4. Finn and Munger			
	Midland	5. State Rd. and North County Line			
		6. Redstone and 11 Mile			
		7. Pine River and Badour			
		8. M-20 and Chippawa River			
		9. Marsh and Flock/Lake Sanford			
	Isabella	10. Millbrook and Winn			
	Gratiot	11. Luce and Jefferson			
	Saginaw	12. Kochville and Westervelt			
		13. Birch Run and Bishop			
	Shiawassee	14. I-69 and M-52			
		15. Lansing and Church			
		16. Lansing and M-52			
Rural Control	Van Buren	1. M-51 and CR-352			
		2. CR-380 and CR-681			
		3. 687 and 384			
		4. I-196 and Phoenix			
	Allegan	5. 102 <sup>nd</sup> and 42 <sup>nd</sup>			
		6. M-89 and US-131			
		7. US-131 and 135 <sup>th</sup>			
		8. 30 <sup>th</sup> and 134 <sup>th</sup>			
	Montcalm	9. M-91 and Sidney			
		10. Sidney and Vickeryville			
		11. Condensary and Crystal			
	Ionia	12. Zahm/Bridge and State			
		13. Cross/Clarksville and Main			
	Lapeer	14. M-24 and Coultier			
		15. Otter Lake and Klam			

APPENDIX II -	- STATEWIDE	SAFETY RELI	Γ USE RATES B`	Y COUNTY
	. 13 1 42 1 12 14 11 12 12	, , , , , , , , , , , , , , , , , , ,	1 (1) 11 11 11 11 11 11 11 11 11 11 11 11 1	1 (((((((((((((((((((((((((((((((((((((

Stratum and County	Pre-Enforcemen Safety Belt		Post-Enforcement Safety Belt U	
Stratum and County	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error
Stratum 1	$90.6\% \pm 2.45\%$	1.24%	$95.6\% \pm 0.77\%$	0.39%
Ingham County	92.2% <u>+</u> 2.01%	1.02%	$95.3\% \pm 1.24\%$	0.63%
Kalamazoo County	$92.4\% \pm 4.84\%$	2.47%	$95.9\% \pm 0.91\%$	0.46%
Oakland County	86.9% ± 5.22%	2.66%	95.2% ± 1.71%	0.87%
Washtenaw County	$94.2\% \pm 2.76\%$	1.41%	$96.6\% \pm 1.50\%$	0.76%
Stratum 2	91.0% ± 1.69%	0.86%	$94.7\% \pm 0.99\%$	0.50%
Allegan County	$96.3\% \pm 0.95\%$	0.49%	96.8% ± 1.93%	0.98%
Bay County	94.4% ± 1.20%	0.61%	$96.0\% \pm 1.52\%$	0.78%
Eaton County	92.4% + 4.30%	2.20%	$96.5\% \pm 2.36\%$	1.21%
Grand Traverse County	90.9%	N/A	98.1%	N/A
Jackson County	94.6% ± 4.42%	2.25%	95.2% ± 1.07%	0.55%
Kent County	84.7% ± 2.93%	1.49%	94.7% ± 1.50%	0.76%
Livingston County	87.9% ± 1.90%	0.97%	$92.1\% \pm 2.05\%$	1.04%
Macomb County	$94.3\% \pm 0.60\%$	0.31%	94.6% ± 1.17%	0.60%
Midland County	$85.5\% \pm 5.88\%$	3.00%	90.9% ± 2.94%	1.50%
Ottawa County	$90.5\% \pm 6.68\%$	3.41%	87.9% ± 8.59%	4.38%
Stratum 3	88.7% ± 2.07%	1.06%	$91.4\% \pm 1.9\%$	0.97%
Berrien County	84.3% ± 8.58%	4.38%	84.9% ± 9.11%	4.65%
Calhoun County	94.6% ± 1.94%	0.99%	$96.9\% \pm 8.73\%$	4.46%
Clinton County	$77.9\% \pm 5.98\%$	3.05%	89.1% ± 9.51%	4.85%
Genesee County	94.3% ± 1.33%	0.68%	$88.9\% \pm 7.98\%$	4.07%
Ionia County	87.1% ± 2.90%	1.48%	92.7% ± 11.14%	5.68%
Isabella County	84.6%	N/A	85.7%	N/A
Lapeer County	$71.2\% \pm 6.96\%$	3.55%	$95.0\% \pm 17.49\%$	8.92%
Lenawee County	$87.2\% \pm 1.43\%$	0.73%	92.9% ± 16.84%	8.59%
Marquette County	$80.8\% \pm 9.89\%$	5.04%	$83.8\% \pm 21.12\%$	10.78%
Monroe County	94.5% ± 1.96%	1.00%	$92.4\% \pm 1.74\%$	0.89%
Montcalm County	80.1% ± 11.21%	5.72%	91.7% ± 8.65%	4.41%
Muskegon County	$74.5\% \pm 10.09\%$	5.15%	83.3% ± 12.60%	6.43%
Saginaw County	93.2%	N/A	89.9%	N/A
Shiawassee County	$93.9\% \pm 2.78\%$	1.42%	94.8% ± 3.37%	1.72%
St. Clair County	$95.3\% \pm 0.86\%$	0.44%	$94.4\% \pm 5.06\%$	2.58%
St. Joseph County	82.8% ± 11.49%	5.86%	$85.4\% \pm 6.94\%$	3.54%
Van Buren County	94.4% ± 3.23%	1.65%	$93.7\% \pm 5.86\%$	2.99%
Stratum 4 - Wayne County	$89.1\% \pm 1.87\%$	0.96%	$94.5\% \pm 1.04\%$	0.53%

<sup>\*</sup> Weighted Safety Belt Usage  $\pm$  95% Confidence Band

## APPENDIX III – STATEWIDE SAFETY BELT USE RATES BY INTERSECTION

All Vehicle Safety Belt Use										
	S	tatewide P	re-Enforcem	ent	Sta	Statewide Post-Enforcement				
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.		
Stratum 1										
Ingham County										
Barnes & Eden	51	54	83	87	110	117	91	96		
Barry & Zimmer	52	55	50	53	50	56	55	62		
Cavannah &										
Pennsylvania	122	131	419	450	129	130	651	656		
Cedar & US-127	67	75	377	422	119	123	163	169		
Holt & M-52	49	52	91	96	122	128	92	96		
I-496 & Dunkell	126	142	264	298	118	126	269	287		
Lake Lansing &										
Hagadorn	52	55	125	132	83	86	167	173		
M-106 & M-52	57	63	465	514	132	143	239	259		
M-43 & Williamston	109	123	340	380	96	101	357	376		
Michigan & Waverly	119	130	404	437	127	135	501	532		
Putnam & M-43	58	61	115	121	100	104	306	318		
Rossman & Onodaga	52	66	78	99	119	133	95	107		
Tihart & Cornell	53	55	64	66	57	60	69	72		
US-127 & Saginaw	133	140	1,156	1,217	159	167	1,526	1,602		
Total	1,100	1,202	4,029	4,372	1,521	1,609	4,580	4,806		
Kalamazoo County										
AB & M-89	64	67	147	154	82	85	245	254		
G & Riverview	57	59	111	114	56	58	56	58		
H Ave & 30th	35	60	45	76	76	80	165	174		
K Drive & 4 Mile	93	99	124	132	116	121	306	322		
M-43 & 6th	80	86	91	98	55	58	74	78		
M-89 & 42nd	92	98	142	151	54	58	68	73		
M-89 & 43rd	85	91	75	80	64	65	175	177		
S Ave & 34th	97	102	171	180	50	55	50	55		
S Ave & 8th	95	100	122	128	77	80	121	125		
W Ave & 2nd	60	63	72	76	58	60	91	94		
Total	758	825	1,098	1,189	688	720	1,350	1,410		
Oakland County										
14 Mile & Main	55	62	398	449	75	77	1,070	1,099		
Clarkston & Baldwin	64	76	293	347	116	119	348	357		
Dixie & Davisburg	47	58	183	226	112	119	283	301		
Holly & Grange Hall	47	58	437	539	109	113	567	588		
I-696 & Orchard Lake	113	117	525	544	97	103	430	457		
I-696 & Woodward	110	115	314	328	122	130	196	209		
I-75 & Sashabaw	49	62	235	298	61	67	76	83		

Stratum, County and Intersection   Total # of Belted of Belted of Belted of Obs.   Total # of Belted of Obs.   Total #		S	tatewide P	re-Enforcem	ent	Sta	atewide P	ost-Enforcen	nent
Middlebelt & N.Western   76   80   602   633   60   65   647   701		Total # of Belted	Total #	Total # of Belted	Total # of	Total # of Belted	Total # of	Total # of Belted	Total # of
N.Western   76	M-10 & 8 Mile	57	60	159	167	96	100	435	453
Shell & Rochester	Middlebelt &								
Tafi & 9 Mile	N.Western	76	80	602	633	60	65	647	701
Tafi & Grand River	Shell & Rochester	42	59	416	584	77	92	99	118
Walton & Lapeer	Taft & 9 Mile	85	91	150	161	99	100	178	179
Total   884   990   4,550   5,234   1,172   1,245   4,740   4,978	Taft & Grand River	92	96	281	294	65	65	260	260
Washtenaw County	Walton & Lapeer	47	56	557	664	83	95	151	173
Ann Arbor & East   Main   54   59   194   212   116   116   263   263	Total	884	990	4,550	5,234	1,172	1,245	4,740	4,978
Main   S4   S9   194   212   116   116   263   263   263									
Austin & Schneider   59		~ 4	50	104	212	116	116	262	262
Dixborro & North   Territorial   70   78   109   121   85   88   147   152									
Territorial   70		59	61	165	171	80	83	137	142
Geddes & Earhart		70	78	109	121	85	88	147	152
Huron/Whitaker									
I-94 & Jackson		100	103	112	123	113	100	150	1,71
I-94 & State	Huron/Whittaker	65	66	254	257	101	102	376	380
M-14 & Maple Mooreville & Stoney Creek         60         64         108         115         126         128         296         300           North Territorial & Zeeb         67         71         147         156         95         98         152         157           Saline-Milan & Mooreville         59         60         124         126         91         95         163         171           Total         822         873         2,763         2,934         1,249         1,292         3,217         3,328           Stratum 2         30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174 <td>I-94 &amp; Jackson</td> <td>114</td> <td>128</td> <td>551</td> <td>618</td> <td>155</td> <td>160</td> <td>573</td> <td>591</td>	I-94 & Jackson	114	128	551	618	155	160	573	591
Mooreville & Stoney Creek         60         64         108         115         126         128         296         300           North Territorial & Zeeb         67         71         147         156         95         98         152         157           Saline-Milan & Mooreville         59         60         124         126         91         95         163         171           Total         822         873         2,763         2,934         1,249         1,292         3,217         3,328           Stratum 2           Allegan County	I-94 & State	94	97	450	465	135	138	343	351
Creek         60         64         108         115         126         128         296         300           North Territorial & Zeeb         67         71         147         156         95         98         152         157           Saline-Milan & Mooreville         59         60         124         126         91         95         163         171           Total         822         873         2,763         2,934         1,249         1,292         3,217         3,328           Stratum 2         Allegan County           102nd & 42nd         54         58         62         66         57         61         57         61           30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007		80	86	249	268	122	131	308	331
North Territorial & Zeeb   67	_			400	44.5	106	4.00	206	200
Zeeb         67         71         147         156         95         98         152         157           Saline-Milan & Mooreville         59         60         124         126         91         95         163         171           Total         822         873         2,763         2,934         1,249         1,292         3,217         3,328           Stratum 2           Allegan County		60	64	108	115	126	128	296	300
Saline-Milan & Mooreville         59         60         124         126         91         95         163         171           Total         822         873         2,763         2,934         1,249         1,292         3,217         3,328           Stratum 2         Allegan County           102nd & 42nd         54         58         62         66         57         61         57         61           30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98 </td <td></td> <td>67</td> <td>71</td> <td>147</td> <td>156</td> <td>95</td> <td>98</td> <td>152</td> <td>157</td>		67	71	147	156	95	98	152	157
Stratum 2         Allegan County         Allegan Coun									
Stratum 2         Allegan County         Allegan Coun	Mooreville		60	124	126	91	95	163	171
Allegan County         62         66         57         61         57         61           30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         60		822	873	2,763	2,934	1,249	1,292	3,217	3,328
102nd & 42nd         54         58         62         66         57         61         57         61           30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County           Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109									
30th & 134th         72         76         159         167         87         89         102         104           M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County           Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County									
M-89 & US-131         82         85         579         600         137         143         497         519           US-131 & 135th         106         109         447         459         82         83         319         323           Total 314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battl									
US-131 & 135th         106         109         447         459         82         83         319         323           Total         314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         40         100         115         109         125         74         82         150         170									
Total         314         328         1,246         1,293         363         376         975         1,007           Bay County         Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
Bay County         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         4         4         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
Finn & Munger         52         55         42         45         95         100         166         174           Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         4         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170		314	328	1,246	1,293	363	376	975	1,007
Garfield & Anderson         53         58         75         82         75         79         98         103           I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170	•	50	5.5	42	45	0.5	100	166	174
I-75 & Pinconning         105         111         358         378         63         64         60         61           M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
M-61 & Standish         54         56         91         95         76         78         106         109           Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
Total         264         280         567         600         309         321         430         448           Eaton County         Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
Eaton County         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170									
Ainger & Battle Creek         68         77         69         78         70         70         110         110           Battle Creek & Kalamo         100         115         109         125         74         82         150         170		204	200	307	000	309	341	430	440
Battle Creek & Kalamo 100 115 109 125 74 82 150 170		68	77	69	78	70	70	110	110
I-96 & Nash   74   78   162   171   68   69   60   61	I-96 & Nash	74	78	162	171	68	69	60	61

	S	Statewide Pre-Enforcement				Statewide Post-Enforcement			
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	
Ionia & M-50	64	67	192	201	74	77	100	104	
M-43 & Canal	80	81	188	190	95	97	347	358	
Main & Washington	117	140	172	206	140	142	313	317	
Nixon & Willow	59	62	124	130	69	72	115	122	
Royston & Island HW	90	95	94	100	68	75	73	81	
Total	652	715	1,110	1,201	658	684	1,267	1,323	
Grand Traverse County									
M-72 & M-31	90	99	735	808	106	108	401	408	
Total	90	99	735	808	106	108	401	408	
Jackson County									
Michigan & Lake	71	81	130	148	64	71	116	129	
Michigan & US-127	64	65	163	166	66	72	86	94	
Rosehill & Elm	61	66	88	95	86	90	285	298	
US-127 & Page	62	63	158	161	85	86	250	253	
Wolf Lake & Cady	67	71	105	111	56	59	85	90	
Total	325	346	644	681	357	378	822	863	
Kent County									
10 Mile & Wabasis	54	67	47	58	61	66	59	63	
17 Mile & Myers Lake	75	07	62	0.1	0.1	0.4	120		
Ave	75	97	63	81	91	94	139	144	
4 Mile & Walker	118	142	85	102	94	98	210	219	
Lake View & 14 Mile	103	124	187	225	70	78	58	65	
Sparta & Ball Park	111	136	137	168	94	95	116	117	
US-131 & 10 Mile	119	152	139	178	103	107	130	135	
US-131 & 68th	218	255	740	866	122	131	221	237	
US-131 & 84th St	185	202	304	332	173	185	305	326	
Total	983	1,175	1,702	2,010	808	854	1,237	1,306	
Livingston County									
Grand River & Pleasant	134	156	162	189	97	103	116	102	
Valley	125	147	293	345	106	112	157	123	
I-96 & Kensington	53	59	110	123	93	101	182	165	
M-36 & Dexter	53	57	119	123	74	83	33	198	
M-36 & M-106	88		538	611	124	136	560	37	
Old US-23 & M-59	58	100 63	86	94	58	63	56	614	
US-23 & Clyde						598		61	
Total	511	582	1,309	1,490	552	279	1,104	1,199	
Macomb County	110	110	201	220	79	92	220	2/2	
22 Mile & Heydenreich	112	119	301	320		82	239	248	
23 Mile & Van Dyke	65	70	123	132	74	77	201	209	
27 Mile & Romeo Plank	61	65	153	163	51	54	97	103	
34 Mile & Van Dyke	100	106	414	439	91	96	253	267	
	94	99	287	303	91	98	313		
Groesbeck & I-696	24	27	201	505	21	20	313	337	

	S	tatewide P	re-Enforcem	ent	Statewide Post-Enforcement			
Stratum, County and Intersection	Actual Total #   of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Jefferson & Martin	59	62	507	533	63	67	155	164
Moravian & Harrington	69	74	276	296	60	64	126	134
Total	560	595	2,061	2,185	509	538	1,383	1,462
Midland County								
M-20 & Homer	71	81	78	89	57	61	59	63
Main & Washington	107	136	102	130	71	80	118	133
Meridian & Lake Sanford	102	115	149	166	70	77	86	95
Pine River & Badour	68	73	59	63	69	78	89	101
Redstone & 11 Mile	58	78	31	42	67	69	58	60
Total	406	483	419	490	334	365	411	452
Ottawa County								102
Lake Michigan & 136th	113	122	233	251	150	166	185	204
Polk & 104th	49	60	49	60	50	62	57	70
Total	162	182	282	311	200	228	241	275
Stratum 3								
Berrien County								
I-94 & M-31	144	172	150	179	88	107	58	71
Pipestone & Naomi	140	156	216	240	144	165	127	145
Union Lake & I-94	46	67	52	76	114	136	119	143
Total	330	395	418	496	346	408	304	359
Calhoun County								
15 Mile & Michigan	69	70	179	182	83	86	249	258
B Drive & Beadle Lake	96	102	181	192	97	100	236	243
I-94 & 5 Mile	108	116	526	565	111	113	447	455
Michigan & Evanston	58	61	348	366	113	118	427	446
Total	331	349	1,234	1,305	404	417	1,359	1,402
Clinton County								
Clark & Upton	97	111	31	35	110	120	44	48
Grange & Main	108	153	98	138	104	125	109	132
Hyde & Welling	46	57	62	77	52	61	44	52
M-21 & Lowell	134	168	90	113	153	163	165	177
Shepardsville & M-21	82	99	46	55	140	157	162	183
Total	467	588	327	419	559	626	525	591
Genesee County	<b>.</b>		0.2	102	0.1	117	262	402
Grand Blanc & Duffield	56	62	93	103	91	117	383	492
I 475 & Court	56	59	134	142	55	58	253	267
M-57 & Vassar	67	71	145	153	49	52	93	99
Mt. Morris & I-75 N Elms Rd & Beacher	65	68	111	116	58	62	354	378
Ballenger & Flushing	59 54	62 57	118 99	124 105	74 60	76 66	125	129 281
							256	
Total	357	379	700	742	387	431	1,463	1,646

	S	tatewide P	re-Enforcem	ent	Sta	atewide P	ost-Enforcen	nent
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Ionia County								
Clarksville & Main	132	156	150	177	105	112	245	261
Zahm & State	164	186	373	423	118	129	220	241
Total	296	342	523	601	223	241	465	502
Isabella County								
Blanchard & Winn	170	201	178	210	126	147	364	425
Total	170	201	178	210	126	147	364	425
Lapeer County								
Lapeer & Coulter	45	69	40	61	118	122	312	322
Otter Lake & Klam	42	57	106	144	66	79	41	49
Total	87	126	146	205	184	201	353	372
Lenawee County Clinton Macon & Mills								
Macon	78	87	163	181	85	100	119	140
M-5O & Townline	101	116	529	608	97	99	254	260
US-12 & Brooklyn	70	82	184	216	85	92	360	389
Total	249	285	876	1,005	267	291	733	788
Marquette County		200	0.0	1,000	207		700	700
Hwy 95 & CR-LLK	81	93	60	69	74	85	84	97
Washington & Hwy 28-BR	95	124	78	102	100	123	100	124
Total	176	217	138	171	174	208	184	221
Monroe County								
Hull & Dunbar	75	78	259	269	101	108	205	219
Ostrander & Bunce	61	68	66	73	76	83	35	38
Ostrander & Tuttle-Hill	67	74	40	44	102	110	74	80
US-23 & Plank Road	60	63	115	121	112	121	96	104
US-23 & Dixon	60	64	50	54	72	76	42	44
US-23 & US-233	69	73	99	105	76	87	62	71
Total	392	420	630	667	539	585	514	556
Montcalm County								
Condensary & Crystal	51	61	54	65	52	58	48	53
Crystal & Sidney	103	142	147	203	110	114	181	188
M-91 & Sidney	124	141	146	166	70	83	90	107
Total	278	344	347	434	232	255	319	348
Muskegon County								
Ravenna & Blackmer	73	107	78	115	94	117	119	148
Ravenna & Ensley	65	76	75	88	93	107	126	145
Ravenna & Sullivan	69	96	65	90	85	103	99	121
Total	207	279	218	293	272	327	345	414

		Statewide Pre-Enforcement				atewide P	ost-Enforcen	nent
Stratum, County and Intersection	Actual Total #   of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Saginaw County								
M-57 & Bishop	55	59	116	124	62	69	92	103
Total	55	59	116	124	62	69	92	103
Shiawassee County								
I-96 & M-52	67	70	208	217	88	91	208	215
Juddville & Chipman	63	70	82	91	82	85	197	204
Lansing & M-52	58	62	145	155	82	89	253	275
Total	188	202	435	463	252	265	658	694
St. Clair County								
M-19 & Lambs	47	49	147	153	56	59	59	62
M-29 & Perch	55	58	248	261	89	92	200	207
Riley Center & I-69	53	55	29	30	95	102	374	402
Total	155	162	424	444	240	253	634	671
St. Joseph County								
Banker & Klingor	49	66	81	109	56	69	46	56
Geason & US-131	89	102	182	209	168	195	294	341
Total	138	168	263	318	224	264	339	397
Van Buren County								
CR-681 & CR-380	52	55	54	57	56	61	50	55
CR-687 & CR-384	122	128	80	84	78	82	88	93
I-196 & Phoenix	74	81	196	215	88	94	347	371
M-51 & CR-352	84	86	163	167	121	129	244	261
Total	332	350	493	522	343	366	730	778
Stratum 4								
Wayne County								
8 Mile & Randolph	100	111	408	453	135	143	887	940
Canton Center & Geddes	99	104	429	451	68	68	485	485
Ecorse & Haggerty	99	114	594	684	165	178	1,097	1,183
Ecorse & Monroe	147	161	1,039	1,138	129	138	434	464
Eureka & Middlebelt	85	106	323	402	171	182	985	1,049
Evergreen &	52	62	619	740	150	160	5.4.1	571
McNichols	78	63 85	1,606	749 1,750	159 149	168 163	541 1,566	571 1,713
Farmington & Plymouth Ford & Sheldon	156	166	970	1,026	85	89	1,060	1,713
Fort & Goddard	102	107	730	766	198	205	601	622
Grand River & 8 Mile	163	177	751	815	160	165	204	210
Greenfield & 9 Mile	103	114	796	880	123	130	989	1,045
Greenfield & M-10	88	97	152	168	89	96	774	835
Greenfield & Michigan	- 00	71	132	100	0,7	70	,,,,	033
Ave	78	85	853	929	58	63	519	563
Greenfield & Plymouth	58	76	841	1,102	127	140	867	956

	S	tatewide P	re-Enforcem	ent	Sta	atewide P	ost-Enforcen	nent
Stratum, County and Intersection	Actual Total #   of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Huron River & Sibley	94	115	85	105	167	172	574	592
I-75 & Southfield	149	172	1,331	1,537	132	137	162	169
I-94 & Harper (Vernier)	99	109	1,156	1,273	147	151	1,295	1,331
I-96 & Livernois	74	92	685	851	171	173	1,228	1,243
Inkster & Van Horn	103	120	218	254	128	144	732	823
Jefferson & Randolph	113	122	717	775	117	119	1,195	1,215
Main & Sumpter	96	105	441	482	128	133	217	225
Middle Belt & I-96	162	171	986	1,040	37	46	275	342
North Line & I-75	130	140	1,025	1,103	118	124	629	660
Palmer & Lilley	81	86	246	261	141	152	867	934
Rawsonville & Textile	97	111	443	506	171	176	1,175	1,210
Rawsonville & Willis	96	122	213	271	117	126	238	257
Rotunda & Outer Dr	145	153	1,096	1,156	103	119	441	509
Savage & Haggerty & Bemis	45	55	106	129	169	173	1,243	1,272
Schafer & Grand River	70	81	724	838	181	190	475	499
Southfield & Warren	156	184	496	585	176	204	216	251
Sumpter & Oakville Waltz	59	75	41	52	88	98	141	157
Telegraph & Eureka	141	157	1,489	1,658	51	61	43	51
Telegraph & North Line	108	117	491	532	142	147	1,731	1,792
Van Dyke & 7 Mile Rd.	123	150	1,647	2,008	139	148	108	115
Van Dyke & Davison	79	98	634	786	119	123	623	644
Vernier & Lake Shore Drive	110	114	549	569	171	175	675	690
Vernier & Mack	110	117	1,145	1,218	186	199	1,004	1,075
Waltz & Willow	60	85	55	77	179	203	141	161
Wayne & Annapolis	99	104	622	654	138	148	1,128	1,210
Wayne & Wick	78	86	298	328	99	104	221	232
Woodward & Warren	102	114	736	822	124	129	849	884
Total	4,187	4,721	27,783	31,184	5,455	5,802	28,636	30,289

## APPENDIX IV – RURAL OVER-SAMPLE SAFETY BELT USE RATES BY COUNTY

Stratum and County	Pre-Media Ru Belt Ra	•	Post-Media Enforcemen Safety Belt U	t Rural	Post-Enforcement Rural Safety Belt Use Rate		
	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error	Safety Belt Usage Rate*	Standard Error	
Flint	$74.5\% \pm 56.78\%$	28.97%	$90.8\% \pm 2.91\%$	1.48%	$92.2\% \pm 2.88\%$	1.47%	
Bay County	$70.2\% \pm 9.81\%$	5.01%	94.4% ± 1.20%	0.61%	96.0% ± 1.52%	0.77%	
Midland County	$71.3\% \pm 10.14\%$	5.17%	$85.5\% \pm 5.88\%$	3.00%	90.9% ± 2.68%	1.37%	
Isabella County	N/A	N/A	N/A	N/A	N/A	N/A	
Gratiot County	N/A	N/A	N/A	N/A	N/A	N/A	
Saginaw County	$75.8\% \pm 0.10\%$	0.05%	94.1% ± 1.36%	0.69%	89.6% ± 0.50%	0.26%	
Shiawassee County	81.1% ± 3.0%	1.58%	$93.9\% \pm 2.78\%$	1.42%	94.8% ± 3.14%	1.60%	
Marquette	90.1% ± 1.7%	0.86%	$75.9\% \pm 3.13\%$	1.60%	85.9% ± 0.25%	0.13%	
Schoolcraft County	88.3% ± 5.47%	2.79%	81.3% ± 4.52%	2.31%	91.5% ± 4.94%	2.52%	
Delta County	95.4% ± 5.58%	2.85%	$83.3\% \pm 0\%$	0%	89.0% ± 2.05%	1.05%	
Dickenson County	91.3% ± 2.24%	1.14%	84.6% ± 4.88%	2.49%	84.5% ± 5.40%	2.75%	
Iron County	88.8% ± 2.78%	1.42%	$72.3\% \pm 5.98\%$	3.05%	$75.9\% \pm 6.72\%$	3.43%	
Houghton County	86.4% ± 4.11%	2.10%	$73.9\% \pm 4.95\%$	2.52%	85.4% ± 4.87%	2.49%	
Keewanaw County	91.4% ± 2.51%	1.28%	71.4% ± 11.41%	5.82%	80.9% ± 6.47%	3.30%	
Baraga County	92.7% ± 1.90%	0.97%	75.2% ± 15.49%	7.91%	86.0% ± 1.66%	0.85%	
Marquette County	92.5% ± 1.42%	0.72%	$73.1\% \pm 6.09\%$	3.11%	88.6% ± 6.72%	3.43%	
Traverse	77.1% ± 3.02%	1.54%	$89.1\% \pm 2.04\%$	1.04%	96.4% ± 1.63%	0.83%	
Roscommon County	N/A	N/A	N/A	N/A	N/A	N/A	
Oscoda County	N/A	N/A	N/A	N/A	N/A	N/A	
Antrim County	80.2% ± 2.33%	1.20%	87.6% ± 3.72%	1.90%	$98.1\% \pm 2.46$	1.26%	
Grand Traverse County	N/A	N/A	N/A	N/A	N/A	N/A	
Leelanau County	76.9% ± 1.18%	0.60%	86.9% ± 2.79%	1.42%	99.1% ± 1.91%	0.97%	
Benzie County	N/A	N/A	N/A	N/A	N/A	N/A	
Wexford County	N/A	N/A	N/A	N/A	N/A	N/A	
Missaukee County	N/A	N/A	N/A	N/A	N/A	N/A	
Lake County	74.1% ± 8.95%	4.57%	$91.1\% \pm 0.56\%$	0.28%	$98.5\% \pm 0.91\%$	0.47%	
Osceola County	N/A	N/A	N/A	N/A	N/A	N/A	
Rural Control	82.4% ± 3.48%	1.78%	90.4% ± 4.68%	2.39%	$94.5\% \pm 0.12\%$	0.06%	
Van Buren County	87.7% ± 1.26%	0.64%	95.3% ± 2.25%	1.15%	$93.7\% \pm 0.50\%$	0.26%	
Allegan County	84.4% ± 2.60%	1.32%	$96.3\% \pm 0.95\%$	0.49%	96.8% ± 1.93%	0.98%	
Montcalm County	81.3% ± 5.91%	3.01%	80.1% ± 11.21%	5.72%	91.7% ± 8.28%	4.22%	
Ionia County	$73.4\% \pm 7.25\%$	3.70%	87.1% ± 2.85	1.46%	92.7% ± 2.22	1.14%	
Lapeer County	80.5% ± 14.89%	7.60%	71.2% ± 6.96%	3.55%	95.0% ± 5.95%	3.04%	

<sup>\*</sup> Weighted Safety Belt Usage ± 95% Confidence Band

## APPENDIX V – RURAL OVER-SAMPLE SAFETY BELT USE RATES BY INTERSECTION

Stratum, County and Intersection	Actual Fotal # of Belted Obs.		ia Rural Weighted Total # of		Post-Me		e-Enfor	cement	Post	-Enforce	ment Ru	ral	
'	Fotal # of Belted	10tal#	Weighted			D.,							
'	Fotal # of Belted	10tal#	Weighted				ral						
			Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	
Flint Stratum													
Bay County													
Finn & Munger	49	72	296	434	52	55	42	45	95	100	166	174	
Garfield & Anderson	49	81	245	405	53	58	75	82	75	79	98	103	
I-75 & Pinconning	61	75	146	179	105	111	358	378	63	64	60	61	
M-61 & Standish	51	61	180	215	54	56	91	95	76	78	106	109	
Total	210	289	866	1,233	264	280	567	600	309	321	430	448	
Gratiot County													
Luce & Jefferson	60	68	122	138	76	92	71	85	72	76	95	100	
Total	60	68	122	138	76	92	71	85	72	76	95	100	
Isabella County													
Millbrook & Winn	63	74	86	101	170	201	178	210	126	147	364	425	
Total	63	74	86	101	170	201	178	210	126	147	364	425	
Midland County	5.5	77	22	22	7.1	0.1	70	00		C1	70	(2)	
M-20 & Vance	55 48	77	23	33	71 107	81	78	89	57 71	61	59	63	
Marsh & Lake Sanford		72	203	304		136	102	130		80	118	133	
Pine River & Badour	80	89	94	104	103	115	147	166	70	77	86	95	
Redstone & 11 Mile	56	97	50	87	68	73	59	63	69	78	89	101	
State Rd & N. County Line	65	80	52	64	58	78	31	42	67	69	58	60	
Total	304	415	422	592	407	483	418	490	334	365	411	452	
Saginaw County													
Fergus & Bishop	50	66	214	283	53	56	164	174	62	69	92	103	
Kochville & Adams	44	58	224	295	55	59	116	124	67	75	69	78	
Total	94	124	438	578	108	115	280	298	129	144	162	180	
Shiawassee County													
I-69 & M-52	88	113	121	155	67	70	208	217	88	91	208	215	
Juddville &	69	83	177	212	63	70	82	91	82	85	197	204	
Chipman		0.5		4.40									
Lansing & M-52	67	82	121	149	58	62	145	155	82	89	253	275	
Total	224	278	419	516	188	202	435	463	252	265	658	694	
Traverse Stratum													
Antrim County  Comfort Road &  Alden Hwy	72	91	246	310	74	83	84	94	94	95	217	220	
Old State & Derenzy	53	65	208	255	63	74	50	59	62	65	62	65	
Total	125	156	453	565	137	157	134	153	156	160	279	285	
Benzie County	-	-	-					-			-		
Cinder & Thompsonville	46	59	103	132	63	65	59	61	65	69	102	108	
Total	46	59	103	132	63	65	59	61	65	69	102	108	

	P	re-Med	lia Rural		Post-Mo		re-Enfor	cement	Post-Enforcement Rural			
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Grand Traverse County												
M-113 & Hency	95	109	517	593	90	99	735	808	106	108	401	408
Total	95	109	517	593	90	99	735	808	106	108	401	408
Lake County												
8 Mile & Bass Lake	47	69	76	112	68	76	69	77	72	72	97	97
M-37 & Old M-63	56	72	140	180	104	114	720	789	110	112	521	530
Total	103	141	216	292	172	190	789	866	182	184	618	627
Leelanau County												
633 & 614	57	72	228	288	64	68	56	59	67	68	47	48
667 & M-72	45	58	254	328	71	83	327	382	83	85	195	199
M-22 & Carter	113	148	1,295	1,696	70	80	122	139	90	90	307	307
Total	215	278	1,777	2,312	205	231	504	580	240	243	548	554
Missaukee County												
Merrit & M-55	71	112	140	221	86	98	74	84	92	100	328	356
Total	71	112	140	221	86	98	74	84	92	100	328	356
Osceola County												
M-115 & 100th	101	146	279	404	86	92	96	102	79	83	331	348
Total	101	146	279	404	86	92	96	102	79	83	331	348
Oscoda County												
CR-F32 & CR-489	62	81	308	402	73	86	110	129	75	80	162	172
Total	62	81	308	402	73	86	110	129	75	80	162	172
Roscommon County												
Maple Valley & West Branch	55	72	210	275	72	92	108	138	80	85	143	152
Total	55	72	210	275	72	92	108	138	80	85	143	152
Wexford County												
CR-38 & CR-25	33	45	5	7	82	94	246	282	72	77	353	377
Total	33	45	5	7	82	94	246	282	72	77	353	377

	P	re-Med	lia Rural		Post-Me	edia / Pı Ru	re-Enfororal	cement	Post-Enforcement Rural			
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Marquette Stra	tum											
Baraga County												
Hwy 28 & W. Korpi	55	62	50	56	48	81	40	68	80	96	76	90
US-41 & King Lake	127	135	221	235	113	133	100	118	104	119	96	110
US-41 & Old M-28	95	103	205	223	48	65	44	59	98	114	91	106
Total	277	300	476	514	209	279	184	245	282	329	263	306
Delta County												
Hwy 35 & Brampton 27.5	74	81	80	88	80	96	74	89	77	88	80	
US-2 & KK Road	82	84	160	163	80	96	64	77	97	108	155	92
Total	156	165	240	252	160	192	138	166	174	196	236	173
Dickenson County												
Hwy 69 & Conard	58	64	34	38	44	61	39	54	73	80	107	265
Hwy 69 & Groveland Mine	71	78	76	84	71	78	44	48	46	57	42	117
US-2 & Hamilton Lake/State St	136	152	209	234	107	129	54	66	55	63	46	52
US-2 & Upper Pine Creek	92	99	283	305	186	215	207	240	110	135	196	53
Total	357	393	603	660	408	483	344	407	284	335	391	241
Houghton County												
Hwy 26 & Iroquios	84	100	246	293	80	100	105	131	98	112	103	117
Hwy 26 & Scout Camp	112	136	209	254	86	123	115	165	92	114	252	312
US-41 & 1st	106	124	211	247	66	95	55	79	54	62	22	25
US-41 & School	117	127	298	324	83	110	79	104	127	147	175	203
US-16 & Hwy 38		65	72	82	49	64	8	10	118	128	130	141
Total Iron County	476	552	1,036	1,199	364	492	362	490	489	563	681	798
7th Avenue &	119	139	130	152	81	126	77	119	65	84	53	69
US-2 Street												
Hwy 69 & Camp 5 Road		74	116	126	92	119	97	125	77	93	86	104
Logan Street & Hwy 69		85	111	126	118	155	116	153	90	110	39	47
US-16 & Hwy 28		72	19	21	40	63	26	42	87	124	155	221
US-16 & US-2		66	82	91	46	62	39	52	59	74	39	49
Total	385	436	458	516	377	525	355	491	378	485	372	490

	P	re-Med	lia Rural		Post-Mo		re-Enfor	cement	Post-Enforcement Rural			
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.		Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.
Keewanaw County												
US-41 & 5th	63	68	122	131	122	186	106	162	78	101	121	156
US-41 &	100	111	120	133	95	123	125	162	99	118	160	191
Portage Entry	1.02	150	241	264	215	200	221	22.4	155	210	201	245
Total	163	179	241	264	217	309	231	324	177	219	281	347
Marquette County												
Hwy 95 & Beach	119	126	144	153	75	100	85	114	75	86	63	73
Hwy 95 & CR-LLK	110	119	181	196	81	93	60	69	142	168	388	459
US-41 & Lake Shore	120	133	116	128	172	258	187	281	74	85	84	97
US-41 & Wawanonowin	111	119	383	411	158	212	144	193	122	128	439	460
Washington & Hwy 28-BR	109	124	62	71	95	124	78	102	99	123	101	124
Total	569	621	886	958	581	787	555	759	512	590	1,076	1,213
Schoolcraft County												
M-94 & Caribou	64	75	66	77	63	83	73	97	101	109	129	139
Maple Street &	101	122	122	148	102	126	89	110	111	129	161	187
Artubus Avenue												
US-2 & CR-442	81	88	140	152	101	117	81	94	113	117	163	169
US-2 & Hwy 77	148	158	80	85	58	70	45	55	105	115	109	119
Total	394	443	407	461	324	396	289	355	430	470	562	615
Rural Control Strat	um											
Allegan County												
102 <sup>nd</sup> & 42 <sup>nd</sup>	63	80	187	237	54	58	62	66	57	61	57	61
30 <sup>th</sup> & 134 <sup>th</sup>	56	70	251	314	72	76	159	167	87	89	102	104
M-89 & US-131	138	164	550	654	82	85	579	600	137	143	497	519
US-131 & 135 <sup>th</sup>	142	157	428	474	106	109	447	459	82	83	319	323
Total	399	471	1,416	1,678	314	328	1,246	1,293	363	376	975	1,007
Ionia County												
Bridge & State	103	136	547	722	132	156	150	177	105	112	245	261
Cross & Main	52	80	133	205	163	185	371	421	118	129	220	241
Total	155	216	680	927	295	341	521	598	223	241	465	502
Lapeer County												
M-24 & Coulter	83	97	616	720	45	69	40	61	118	122	312	322
Otter Lake & Klam	44	67	164	249	42	57	106	144	66	79	41	49
Total	127	164	780	970	87	126	146	205	184	201	353	372

	P	re-Med	lia Rural		Post-Me	edia / Pi	re-Enfor	cement	Post-Enforcement Rural				
						Ru	ral						
Stratum, County and Intersection	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	Actual Total # of Belted Obs.	Actual Total # of Obs.	Weighted Total # of Belted Obs.	Total # of		Actual Total # of Obs.	Weighted Total # of Belted Obs.	Weighted Total # of Obs.	
Montcalm County													
Condensary &	47	63	234	313	51	61	54	65	52	58	48	53	
Crystal													
M-91 & Sidney	102	125	435	533	103	142	147	203	110	114	181	188	
Sidney &	56	64	269	307	124	141	146	166	70	83	90	107	
Vickeryville													
Total	205	252	937	1,153	278	344	347	434	232	255	319	348	
Van Buren County													
687 & 384	75	86	92	105	52	55	54	57	56	61	50	55	
CR-380 & CR-681	76	87	196	224	122	128	80	84	78	82	88	93	
I-196 & Phoenix	131	148	746	842	105	112	204	218	88	94	347	371	
M-52 & CR-352	106	123	280	325	84	86	163	167	121	129	255	261	
Total	388	444	1,313	1,496	363	381	501	526	343	366	730	778	